DOCUMENT RESUME

ED 468 018 EC 309 152

TITLE	Mississippi Dyslexia Handbook: Guidelines and Procedures Concerning Dyslexia and Related Disorders. Revised.
INSTITUTION	Mississippi State Dept. of Education, Jackson.
SPONS AGENCY	Department of Education, Washington, DC.
PUB DATE	2002-00-00
NOTE	90p.; Revised by the Office of Reading, Early Childhood & Language Arts.
CONTRACT	ES276A000024
AVAILABLE FROM	Office of Reading, Early Childhood & Language Arts, Mississippi State Department of Education, 359 North West Street, P.O. Box 771, Jackson, MS 39205-0771. Tel: 601-359-3778; Web site: http://www.mde.k12.ms.us/ACAD/ID/Curriculum/LAER/index.html.
PUB TYPE	Guides - Non-Classroom (055) -- Tests/Questionnaires (160)
EDRS PRICE	EDRS Price MF01/PC04 Plus Postage.
DESCRIPTORS	*Academic Accommodations (Disabilities); *Classroom Techniques; Disability Identification; *Dyslexia; Elementary Secondary Education; Inclusive Schools; Intervention; *Multisensory Learning; *Prereferral Intervention; Reading Strategies; State Regulation; Student Characteristics; Study Skills; Symptoms (Individual Disorders); Writing Strategies
IDENTIFIERS	*Mississippi

ABSTRACT

This handbook of procedures related to dyslexia is designed to provide guidelines for Mississippi school districts, teachers, and parents in the identification and instruction of students with dyslexia, to assist regular educators in gaining current information concerning dyslexia, accommodations and modifications, and to provide information on instructional programs designed to meet the unique needs of students with dyslexia. Following an introduction and discussion on the characteristics associated with students with dyslexia, the handbook outlines specific academic modifications and accommodations for helping students with dyslexia maintain or regain self-esteem and academic integrity. Suggested interventions are then provided for reading, spelling, handwriting, copying, writing composition, study skills, and organizational techniques. The intervention and identification process is also described, including the data gathering and review phase, provision of instructional interventions within regular education classrooms, assessment for dyslexia, and multisensory programming. Multisensory program characteristics are outlined, along with costs and contacts for programs that are currently being utilized to provide services to students with dyslexia. Appendices include provisions of state law, a referral form, a multisensory program review form, answers to frequently asked questions concerning students with dyslexia, and additional forms. (Contains 23 references.) (CR)

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Mississippi Dyslexia Handbook

Guidelines and Procedures Concerning Dyslexia and Related Disorders

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INTRODUCTION

The purpose of this handbook of procedures related to dyslexia is to provide guidelines for Mississippi school districts, teachers, and parents in the identification and instruction of students with dyslexia.

This resource guide was prepared to assist regular educators in gaining current information concerning the term dyslexia, accommodations and modifications, as well as, instructional programs designed to meet the unique needs of students with dyslexia. During the 1996 legislative session, House Bill 1469 (see Appendix A) was passed which requires the Mississippi Department of Education to adopt pilot programs to evaluate and identify students with dyslexia. In accordance with the pilot programs, the law authorizes school districts to implement appropriate multisensory, systematic language-based regular education programs for dyslexic students that do not qualify for special education services.

This guide will assist in providing appropriate services for all dyslexic students. House Bill 1469 provides for pilot programs to assist regular educators in meeting the needs of such students in the regular education systems.

Education is and will continue to be a major feature in the development of promising practices and the competitive spirit to meet the challenges of the next century that are in progress throughout our nation. It is important that Mississippi students have the opportunity to use their individual strengths in a way that enhances their quality of life and the society in which we live. Dyslexic students desire to be a part of meeting and conquering such challenges. With careful planning and support, these students can achieve goals that lead to success in the educational environment.

Every Child A Reader...Quality Education for Every Child

ACKNOWLEDGEMENTS

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This publication was revised by the Office of Reading/ Early Childhood/ Language Arts.

2002

A special thank you is extended to Vicki Davidson, Mississippi Department of Education, Billie Hill, Director of Oak Hill School for Dyslexia, Lashundria Jackson, Mississippi Department of Education, Howard Kerce, Deputy of the Supreme Council Orient of Mississippi, and Donna Porter, Picayune School District Dyslexia Coordinator, for their contributions to this document.

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A Mississippi Dyslexia Handbook was prepared with funds provided under Goals 2000 Technical Assistance Federal Aid #ES276A000024, U.S. Department of Education. The opinions expressed herein do not necessarily reflect the position or policy of the Department of Education, and no official endorsement by the department should be inferred. Portions of this document may be reproduced with appropriate citation.

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DEFINING THE TERM DYSLEXIA

There have been many definitions for dyslexia over the years and this has created some resistance to using the word "dyslexia." Due to the confusion in sorting through the various definitions, it has been easier to use terms such as "reading disability" or "learning disability" to describe a student with dyslexia. Parents, national organizations, and researchers cannot agree on one definition, but they often agree on common characteristics of students with dyslexia as well as the exclusionary factors to be considered when determining a diagnosis for a student.

The word dyslexia comes from two ancient Greek words. The prefix (dys) means "lack of" or "difficult," while the second part of the word (lexia or lexicos) means, "pertaining to words." Although estimates of the prevalence of dyslexia are not agreed upon, some researchers estimate that as many as 15 percent of students within the United States may be classified as dyslexic.

A definition that has obtained broad respect and accounts for common links of definitions is from the World Federation of Neurology. This definition states, "**a disorder manifested by difficulty in learning to read despite conventional instruction, adequate intelligence, and sociocultural opportunity. It is dependent upon fundamental cognitive disabilities which are frequently of constitutional origin.**"

This definition provides a basis to narrow the focus of the term. Dyslexia is not primarily attributable to subnormal intelligence or to socioeconomic deprivation. Also, if educational problems are primarily due to physical, sensory (hearing and/or vision) or emotional disabilities, these disabilities are generally considered exclusionary factors for determining a student to be dyslexic. This is not to say that a student with the above physical disabilities cannot have dyslexia, but further evaluation would need to be conducted to establish whether these disabilities are the reason for the student to exhibit educational difficulties.

Students who have been provided conventional instruction and continue to be unsuccessful need a review of their educational strengths and weaknesses conducted to determine specific difficulties exhibited in classwork, homework, and achievement tests.

Dyslexia cannot be "cured or fixed," but the effects of such a disability can be lessened. It is a condition that requires specialized instruction to moderate its effects on a student's educational and social endeavors. The earlier it is diagnosed, the better the opportunity is for a student to experience success in the educational system.

While dyslexia may be identified as a Specific Learning Disability under the definition of the Individuals with Disabilities Education Act and the Mississippi's Referral-to

Placement regulations, the terms should not be used simultaneously. While many of the students identified as having a Specific Learning Disability have a reading problem, including dyslexia, this category as defined in regulations includes a broader base for identification of students in need of special education than those defined as dyslexic. According to Mississippi law Sections 37-23-1 through 37-23-75 (See Appendix A) the definition of dyslexia and related disorders to be utilized in the process of identification and services is outlined in this guide as follows:

> *Dyslexia means a language processing disorder that may be manifested by difficulty processing expressive or receptive, oral or written language despite adequate intelligence, educational exposure and cultural opportunity. Specific manifestations may occur in one or more areas, including difficulty with the alphabet, reading comprehension, writing and spelling.*
>
> *Related disorders shall include disorders similar to or related to dyslexia such as developmental auditory imperception, dysphasia, specific developmental dyslexia, developmental dysgraphia and developmental spelling disability.*

To better understand the term dyslexia it is necessary to review as much information as possible regarding the subject. A list of resources that can assist in this endeavor is included in this handbook (See Appendix B). Also a Glossary of Terms has been provided (See Appendix C).

UNDERSTANDING DYSLEXIA

Dyslexia can manifest itself in a manner that makes the symptoms unrecognizable. Frustrated teachers unable to recognize dyslexia may label these students as lazy, uncooperative, or troublemakers while their real problems go untreated. As a result, these children may move through the educational system and graduate with minimal education and experience behavioral problems resulting from years of being dismissed as "difficult," "lazy," or "unmotivated."

DeFries Olson, Pennington, and Smith (1991) connected with the Colorado Reading Project funded by the NICHD (National Institute of Child Health and Human Development) collected data for over ten years. The results revealed an equal number of male and female dyslexics. Also, a student may show improvement with age or by puberty. Often the problem with assisting an adolescent student is that he or she may have given up on learning or has a very negative school concept due to failure.

Medical experts often define dyslexia as a condition resulting from neurological, maturational, and genetic causes. While definitions vary with different disciplines, all disciplines would probably agree that students of normal intelligence who have not learned to read despite exposure to adequate instruction evidence dyslexia. Psychologists and educational personnel relate dyslexia to specific reading problems or disorders without reference to cause.

It is important to understand the research regarding the cause of dyslexia in order that all educators, medical personnel, psychologists, psychometrists, and parents can better meet the needs of the child. Each dyslexic student is unique based on the impairments exhibited.

Neurologists and other medical experts often describe dyslexia as a disability resulting from brain dysfunction of various types and degrees. While we all have some brain dysfunction, we usually are not affected by these minor differences and accept them as individual idiosyncrasies or ignore them altogether. Color-blindness, lack of rhythm, or inability to play sports due to poor athletic ability are examples of brain dysfunction. For the dyslexic student, brain dysfunction can be devastating due to the impact it has on learning academic skills such as reading, writing, spelling and math calculations.

When serious brain dysfunction occurs within the left hemisphere of the brain, which controls the processing of spoken or written language, a student will have difficulty in listening, speaking, reading, and/or writing. Math skills may also be affected due to difficulty in processing mathematical symbols. The degree of difficulty and the specific language processes affected are based on where the brain dysfunction actually is located within the left hemisphere and to what degree the dysfunction is manifested.

The right hemisphere of the brain handles non-language and visual processing. While some dyslexic students may have visual processing problems due to dysfunctions in this hemisphere of the brain, the majority of students will have problems associated only with the processing of language since the left hemisphere controls these skills. This explains why students with dyslexia may have tremendous strengths in activities such as art or athletics, and yet experience great difficulty with spelling, writing, reading and math calculations.

Scientists have also learned that information obtained from one side of the body is immediately forwarded to the opposite side of the brain. For example, if you touch a piece of ice with your right hand, the sensation is sent to the left side of the brain. Even though this occurs, both left and right hemispheres send signals back and forth between each other in order for information to be processed by both hemispheres which is needed to provide us with information. This allows us to talk and paint a picture at the same time. It is believed that the two hemispheres of the brain not working together in the sending of messages or signals back and forth appropriately can also cause dyslexia.

While the problem with processing information lies within the central nervous system, it is manifested by brain dysfunction. Within the body there is a very complex system that carries messages between the various parts of the body and the brain. If messages are improperly sent or received due to problems within the central nervous system, the result may be dyslexia. Two examples of this are: 1) an image of a printed numeral may have difficulty as it goes from the eye to the brain, or 2) the fingers and hand do not obtain the correct message from the brain about writing an alphabet letter.

Although educators are not physicians and cannot diagnose brain dysfunction and neurological impairments, they can determine whether a student is experiencing problems associated with such medical problems. Language, reading, writing, spelling, and math are areas in which educators are trained to determine a student's strengths and weaknesses utilizing a variety of methods and tests.

Another area of great importance in determining dyslexia is the perceptual ability of a student. Perception is the ability to attach appropriate meaning to what a student sees, hears, tastes, touches, and smells. If these signals are incorrectly interpreted within the central nervous system, then significant problems occur in the academic areas. Many specialists believe that there are three forms of dyslexia: those with auditory based problems, those with visual based problems, and those with a combination of both forms of these problems.

Visual perception includes the distinction of likenesses and differences in size, shape, direction, color, and other qualities of the visual symbols seen. Therefore, if a student cannot distinguish between a square and a triangle or the words **been** and **need**, acquiring necessary academic skills will be very difficult. Problems in spatial and visual skills needed for acquiring reading skills are evidenced in visual discrimination, visual sequencing, visual figure/ground discrimination and visual depth perception.

Auditory perception is the ability to distinguish similarities and differences between sounds. Students with such a perception problem can not differentiate between sounds and may have difficulty in distinguishing phonemic units of speech and a subsequent inability to learn the relationship between visual appearances and sounds of letters and words. Therefore, a student with this type of problem will not be successful in conventional educational programs based solely on phonetics. The student will also have problems with oral instructions and lectures. Problems are noted in auditory discrimination, auditory sequencing, and auditory focus.

The last of the perception areas to be explored is tactile perception. This is the ability to recognize the differences and similarities in shapes and patterns by touch. It is important to know if a student exhibits problems in this area of perception to assist in diagnosing dyslexia and to better manage the student's program needs.

Reading and writing skills are taught utilizing the auditory, visual, and/or tactile perception avenues. If a student is deficient in any of these, alternate routes must be found to teach the student. For example, a student with severe visual perception problems should not be taught using only the whole language approach. A student with severe auditory perception problems should not be taught using only the phonetic approach but could benefit from a multisensory language approach to reading. The point is that each student with dyslexia has strength(s) and weaknesses. Educators must determine a dyslexic student's strength(s) and teach to the strengths versus teaching to the student's weakness (es). Therefore, determining any perceptual difficulties is a necessity when diagnosing dyslexia or determining a student's program needs.

Students with dyslexia also have problems with language processing. Although they sometimes have problems with spoken language, they always have difficulty with language in its written form, including the reading of and copying of written text. The majority of children with dyslexia do not have problems expressing themselves orally. They often learn communication skills (speaking and listening) at a rate comparable with other children prior to entering school.

The problem is usually recognized when a student enters kindergarten or the first grade and is required to read and write using printed instructions and assignments presented from textbooks, the chalkboard, and/or workbooks. Prior to entering school these students used oral expressive language for communication and were not required to comprehend using printed letters, words or sentences. Books may have been read to them at home or in day-care and through memory or other picture cues they may have been able to recite any pre-primer or primer task presented.

Dyslexic students have various problems with reading, spelling, and writing. They may have difficulty acquiring phonemic awareness, which is connecting the sounds and symbols of language. They may perceive the shape of letters differently or be unable to remember the names or sounds of the letters. Often students have problems writing letters and words. Their written work will appear messy and include erratic spelling errors. These errors are due to the student not being able to identify the sounds in the

word correctly, to remember the letter representing the sound, and/or to actually make the right movements in order to write a word.

Research indicates that many dyslexic students experience various levels of emotional problems early in their school life as more emphasis is placed on reading activities, leaving them with the feeling of inadequacy. Dyslexics sometimes experience problems with social relationships. This can occur if the use of oral language is affected. Also, difficulty remembering or expressing the order of events due to poor sequencing and memory recall may cause a student to struggle in finding the right words to use or pause before answering questions. Therefore, it may be perceived that a student is not truthful, low functioning, or even socially immature. Poor self-image and the lack of peer acceptance are factors that create low self-esteem.

Students with dyslexia commonly feel anxiety. Many times they perform erratically without understanding how they obtain success in one area of school but experience limited or no success in another. As explained previously, a dyslexic student may be very successful in art, band, or even athletics, but fail in academic areas. This is due to problems associated with the processing of information.

Dyslexic students can also be successful with a given task on one day while experiencing difficulty with the same task on another day. Such unpredictable performance creates great anxiety in new situations, as well as when interacting with peers and adults.

Characteristics associated with dyslexia include:

- Problems in learning the names of the letters of the alphabet
- Difficulty in learning to write the alphabet correctly in sequence
- Difficulty in learning and remembering printed words
- Reversal of letters or poor sequences of letters when read or written
- Difficulty in learning to read
- Difficulty in reading comprehension
- Cramped or illegible handwriting
- Repeated erratic spelling errors
- Poor visual memory for language symbols
- Auditory language difficulties in word finding, fluency, meaning, or sequencing
- Difficulty transferring information from what is heard to what is seen and vice versa
- Word substitutions in oral reading
- No enjoyment of reading as a leisure activity
- Slow reading speed
- Error proneness in reading
- Forgets or leaves assignments
- Loses books, pencils, assignments, notes, etc.
- Easily distracted
- Difficulty completing task within the given time limit

Characteristics that may be associated with dyslexia include:

- Delay in spoken language
- Difficulty in finding the "right" word when speaking
- Late in establishing preferred hand for writing
- Late in learning right from left and other directionality components such as up-down, front-behind, over-under, east-west and others
- Problems in learning the concepts of time and temporal sequencing, (i.e., yesterday, tomorrow, days of the week and months of the year)
- Family history of similar problems
- Delay in learning to talk
- Delay in motor milestones
- Difficulty in math (related to sequencing steps or directionality)

In order to meet the educational and social needs of a dyslexic student, educators, and parents must offer support, encouragement, and understanding. Strengths of the student need to be identified and assistance in reaching educational goals based on these strengths should be planned by the individuals involved in evaluating the student. Attainable goals need to be set for the dyslexic student in order for success to be experienced. Educators can not afford to frustrate the student by teaching different skills that are not coordinated between the regular education classroom and the remedial instruction. Parents should also be a part of the team responsible for planning the academic and social success of the student. With the parents understanding their child's problems, they can offer the support and assistance needed at home to meet educational expectations.

ACCOMODATIONS AND MODIFICATIONS

The following is a summary of background information, specific ideas, and general suggestions for classroom strategies that are known to assist students in becoming successful learners. These ideas are based on sound educational theory, good teaching methodology, and positive human psychology. Most of the ideas here are not entirely new. They may be utilized with a slight change or added modification based on the individual needs of the student. Many of these suggestions are techniques that are utilized daily as a part of a quality teaching program.

Even though academic needs and progress are important, the key for the teacher is to find positive strategies that do not diminish the student's self-esteem. In every case, the self-esteem and emotional well being of the dyslexic student should be a major consideration when determining which strategies are useful, timely, and appropriate. For example, a second grader struggling to decode words may not mind reading aloud since other second graders may not be completely fluent as well. However, a dyslexic seventh grader who does not read well will not want to read aloud in class under any circumstance. Many dyslexic people have bitter memories of school days because they were forced to stand up and read aloud or spell in front of classmates. If in doubt about whether the class activity or intervention is appropriate, teachers should mentally place themselves in the student's situation before making the decision.

The following are some specific classroom suggestions for helping students maintain or regain self-esteem and academic integrity.

DO

- Become confident that students can and will learn
- Exhibit empathy and understanding
- Call attention to the strengths of students
- Discuss how students feel about contributing to the class
- Discuss ways to encourage classroom participation
- Do provide accomodations and modifications
- Provide students ample opportunity to "rehearse" before being asked to present before the class
- Be patient

DO NOT

- Call attention to the student's weaknesses
- Require students to read and/or spell aloud in class
- Become frustrated

Many of the important classroom intervention strategies discussed in this document may be classified as either accommodations to the academic setting or modifications of the work requirements. Although some accommodations and modifications may lend themselves to a certain age group or to the development of a particular skill or subject, they usually can be adapted to any age or course boundaries.

An **accommodation** is any technique that alters the academic setting or environment and enables students to indicate more accurately what they actually know.

Examples:
- Having un-timed or extended time for tests or assignments
- Moving to a quiet, isolated location to take tests
- Assigning an individual to write the student's exact answers
- Providing a reader to read the exact questions to the student

An accommodation generally does not change the information or amount of information learned. It merely provides the extra time, the special setting, and/or the added assistance that enables accurate assessment of the student's real knowledge rather than an assessment of the student's weaknesses. For example, the accommodation of oral testing would allow a student to demonstrate his or her knowledge, even if he or she can not read, has dysgraphia (inability to write based on extreme spelling disability that is not due to brain damage but to a developmental condition) can not spell, or needs extra thought time to express that knowledge.

A **modification**, which encourages and facilitates academic success, is any technique that alters the work required in some way that makes it different from the work required of other students in the same class.

Examples:
- Giving an oral report when other students are doing a written report
- Composing 10 instead of 20 sentences
- Taking the test in essay format rather than in multiple choice format, or vice versa

A modification helps the student cope with a broader array of academic tasks and, like some accommodations, allows for more accurate assessment of a student's true knowledge. For instance, the modification of composing 10 sentences rather than 20 provides for effective practice without the extreme time required to write 20 sentences. This allows time for other important academic tasks. When making modifications, teachers should ensure that the reduced assignment gives opportunities for practice in the same areas as the other students.

Both accommodations and modifications are very important tools in order for the classroom teacher to assist students. Most authors do not make the distinction between accommodations and modifications. Some intervention tools might be seen as either an accommodation or a modification depending on the situation or implementation. The

distinctions between accommodation and modification are important for on going monitoring of the student's academic progress.

The positive aspects of accommodations, especially those related to extended time, are that they do not affect what information is learned and students are given ample opportunity to maximize their learning potential. Accommodations of extended time may be a lifelong need for the student. Most accommodations require appropriate planning by the teacher and often require outside assistance from parents, remedial teachers, or teacher assistants for optimum success.

Learning increases both receptive and expressive language skills. Some accommodations and modifications are intended to enhance the receptive abilities of students while others encourage and allow for greater expressive possibilities. Teachers should attempt to vary the classroom interventions to maximize both receptive and expressive learning.

SPECIFIC ACCOMMODATIONS

Preferential seating: Planning the seating arrangement of the classroom where the student has close proximity to the focal point of the instructional area. Often it is helpful for the student to be placed close to the area where the majority of direct instruction takes place. This placement may mean sitting near the teacher's desk, near the board, or near an activity center.

Paraphrasing of information (both verbal and written): Condensing verbal or written information in such a way that it is short, yet complete, and/or uses alternate vocabulary to make the ideas and information easier to comprehend. The purpose of this technique is to take into account the auditory processing difficulties of the student.

Instruction, practice activities, and directions given by using more than one modality (multisensory): Using various methods to instruct, guide practice, or give directions that are multisensory; that is, the instruction, directions, or practice activities physically involve the student and require that multiple modalities (auditory, visual, kinesthetic, tactile) be used simultaneously or in rapid succession. Direct instruction techniques that engage the student's hearing, vision, and tactile senses help assure that the student's strongest learning pathway is tapped. Materials that may be used include cassette recorders with headphones, chalkboards, small writing boards, visual aids (i.e., pictures, slides, and videos) and three-dimensional manipulative and real-life examples.

Opportunity for increased response time: Allowing the student that has slower processing skills the opportunity to think of and to give a more complete answer that reflects the student's actual knowledge. The student may be given the questions well in advance so that rehearsed responses can be made more quickly.

More frequent opportunity for review: Giving the dyslexic student frequent (preferably daily or weekly) opportunities and techniques to review recently presented skills or cumulative information presented in the course. The teacher, teacher assistant, peer helper, or the student may create an audio or video tape of the most important information for easy review and/or a review "deck" of index cards. The review cards should contain pictures that can serve as visual mental cues as well as written words. The tape or review decks may be organized according to units and may be cumulative throughout the semester. When this accommodation is utilized, teachers should plan and provide for routine review times, which become everyday habits for the student.

Tape recorder for class: Allowing students to record classroom instruction, lecture notes, and/or dictation. As with any use of the tape recorder for learning, guidelines for use should be established, and special training should be given so that the technical aspects of using the tape recorder do not hinder the student's access to the information captured on tape. The teacher may wish to control the tape recording of many activities

in order to use the tapes with multiple students and in more than one class. This accommodation is especially important for some class events, such as giving directions. Sometimes the student will need to have directions repeated or paraphrased in different words. At other times it may be helpful for the student to hear the same wording or instructions more than one time. This strategy enables the student to become accustomed to the consistency of the teacher's direction giving style.

Extended time to complete assignments: Allowing students extra but specified time in which to complete the full assignment (i.e., over the weekend). Unless there are extenuating or unusual circumstances, this accommodation should be pre-planned and should not be used extemporaneously.

Taped answers for homework: Using a tape recorder to record answers to homework questions or problems. This accommodation is especially useful in content courses such as social studies and sciences. Careful guidelines should be given as to the format and organization of the taped assignment. For instance, tapes should be carefully labeled. The student should begin each new assignment with the usual "heading" of name, date, and subject. Each assignment section should be orally numbered. If the teacher normally requires the questions to be written as part of the homework, parents may read the questions into the recorder.

Larger print for assignments or tests: Having students read, do assignments, or take test on pages that have either been photocopied or enlarged by 30% to 100% or that have been originally created with larger size print. A benefit of this accommodation is that reading and paper and pencil tasks are easier.

Special study sheets for tests: Review sheets should outline in logical, sequential manner the most useful or pertinent information. These review sheets should be given to the student as early as possible and follow a questioning format (though not the exact questions) that the test will have and/or use multiple questioning formats for the same information. Once created, they might be used numerous times.

Extended or untimed tests: Provide students the opportunity to take tests without the pressure of time constraints. This accommodation may mean dividing the test into multiple parts so that students may take the first portion of the test before school and additional portions during class and/or after school. If this accommodation is necessary in every class, shorter tests for some classes should be considered.

Oral taped testing and answering: Giving tests that have been previously read into a recorder. The student reads along with the test and then writes answers on the test form, records answers on another cassette tape, or tells an amanuensis who writes the student's answers. The amanuensis may be a teacher, a teacher assistant, a volunteer, or a peer helper.

Homework completed on computer: Utilizing various computer applications to do homework assignments. The intent of this accommodation is to alleviate handwriting,

composition, spelling, and time problems. Some assignments, such as essays and reports, are obvious candidates for computer completion. Other assignments, such as math and grammar, are less obvious but may be equally helpful for the student.

SPECIFIC MODIFICATIONS

Copies of teacher's notes: Allowing students to have copies of the teacher's lecture notes to ease writing requirements and to assure that information for home study is accurate, sequentially ordered, and well organized. Although it is not always possible, if the notes are given to the student ahead of time, he or she may be able to follow the classroom instruction more readily.

Peer note taker: Having a classmate take notes preferably on carbonless duplicating paper. Care should be taken to ensure that the peer assistant wishes to perform this volunteer job and is an excellent and thorough note taker who follows a consistent pattern of accurate spelling and legible writing skills. Sometimes it is preferable for the student to continue to practice taking notes and have a peer note taker serve as a model. This modification must be instituted with self-esteem issues in mind and should not be used as a substitute for teaching note-taking skills unless necessary.

Reduced or altered assignment (in class): Requiring less academic output of the student (usually on work that involves extensive copying), paper-and-pencil tasks, or lengthy reading passages. It may be that fewer questions/problems are answered, shorter written compositions are allowed, or the reading amount is reduced. Reducing the quantity of work may, in some cases, ease the pressure to produce work quickly rather than accurately, completely rather than correctly, and sloppily rather than neatly.

Reduced or altered assignments (homework): The same as above except that the specific practice problems, reading, and written work must be more carefully planned to ensure all new learning is adequately practiced. Assistance and monitoring by parents enhance this modification.

Alternate format for test (multiple choice or essay): Changing the format of the test either partially or completely to attain the actual knowledge of the student more effectively. For some students this modification means giving a subjective test such as essay or oral essay test rather than an objective test such as multiple choice. There is no clear-cut, universal trend as to which testing format is best for dyslexic students. Individual needs should be reviewed and taken into account. The key in alternate format testing is to find the best way to access what the student knows.

Modified test: Changing or adding test questions to best attain the actual subject knowledge of the student. For instance, a matching test with 20 or more choices might be divided into two sections of 10 each; a labeling question might have a word bank for the student to choose from; a question requiring graphing might have multiple-choice answers. These modifications will help the student respond to the information asked.

Assistance from an amanuensis: Having someone other than the student record notes, daily assignments, classwork, and/or homework, or transcribe information. This modification may be made for short periods of time, for selected courses, or for selected activities within a course.

Cooperative learning: Learning by being part of a small group in which students pool ideas, trade information, and make group decisions. This is considered a modification only if the cooperative learning situation is not part of the whole class instructional methodology or is somewhat different. It should be noted that cooperative learning might be a very good or very bad methodology for dyslexic students, depending on the characteristics of individuals within the group and the group dynamics. Passive students whose skills are minimal may be excluded from the learning process or become too dependent on stronger group members. More aggressive or socially inept students may not be ready for the complex social interaction required for successful cooperative learning.

SUGGESTED INTERVENTIONS BY SUBJECT AREA

READING

Although many students want to read well, the task is often overwhelming considering its complexity. The reading rate of dyslexic students can be characteristically halting or slow. Some are prone to reading errors, such as reversals, omissions, substitutions, and transposals of letters and words. They may have problems "tracking" as their eyes move across the page. They may lose their place as a result of skipping up or down to the wrong line or back to the same line instead of moving smoothly from left to right. Dyslexic students have difficulty using punctuation as a guide and difficulty reading with appropriate intonation.

The following strategies may assist with reading tasks in the regular classroom setting:

Subvocalization: Moving the lips inaudibly or quietly while reading. This multisensory technique helps the student "feel" and "hear" the words he or she is seeing on the page.

Use of index card, pencil, highlighter and/or window card for keeping place: Using any instrument to help alleviate tracking difficulties. The choice of the instrument should be the student's decision and may change over time. An index card placed under or over the line of reading is especially helpful in the lower grades, and may be needed throughout school. The eraser end of a pencil or a highlighter scanned across the page while reading not only helps with tracking, but also creates tactile reinforcement for the student. The student with severe tracking problems may find a "window card" helpful. A small section the size of a word or group of words is cut out of the center of an index card. The student places the card on the segment of words being read. This strategy masks out the other words and prevents mistracking.

Cursive traceover: Tracing the cursive shape of a letter over the printed letter as a cue to the sounds within the word. This strategy often helps the student recognize reversals. For example, the cursive letter *b* swings up and loops back to the left while the letter *d* curves up, over and back very differently from the *b*. The same idea works for other easily confused letters such as *t* and *f*, *m* and *n*, etc. Again this strategy is a multisensory one that combines the tactile with the visual sense.

Frequently used word/phrase practice: Isolating frequently used words or phrases for special practice. Some words or word pairs tend to give the student special trouble. Shorter, more abstract, easily reversed words, (a and the; of and to; when, where, and then) are easily substituted in the student's reading. The student is especially prone to misread prepositions. Some reading theorists believe that misreading or skipping the

smaller words is relatively unimportant. For the dyslexic, misreading words such as *on* and *no*, *of* and *to*, *when* and *then* is devastating to comprehension.

Highlighted and/or marked text: Copying the information from the textbook and marking the text in such a way that the most important information is clearly indicated so the student knows which ideas should receive the most attention. This strategy also reduces the amount of reading, thus allowing time for completion of other tasks.

Colored film overlays: Placing a colored film (usually blue, yellow, rose, or gray) over the page to reduce the contrast of the black letters on a white page. While this controversial practice has not been proven to help, many students report that the "words move on the page" or that they become "fatigued" from looking at the page of words. If this problem exists and the student believes the color helps, then overlays should be an option.

Altered lighting conditions: Changing the lighting (usually reducing it) to reduce the contrast. This strategy may be controversial, but one worth investigating based on the individual student's learning styles.

Books on audiotape: Listening to textbooks that have been recorded verbatim. If the student is able to follow along in the text, this activity becomes another multisensory technique. This often recommended strategy requires careful planning and special training to work successfully. Caution should be given to the student to focus on the information and to stop often, at least at every section of text. This will allow the student to review the information and ideas mentally. The "readers" on the tape must use appropriate rate, intonation, and inflection. They must provide verbal clues as to the location of the reading within the text; otherwise, the student will become lost in an avalanche of words. Oral reading rate is approximately 150 to 185 words per minute. The student's optimum listening comprehension rate should be considered.

Lower reading level text of same topic: Having the student read text about the same topics on the particular reading level of the student. Be very cautious with this strategy, keeping in mind the reading ability and age of the student.

SPELLING

Long after other aspects of written language have begun to progress, the dyslexic student still has great difficulty spelling correctly. Some are able, with inordinate effort, to retain the visual memory of a list of words just long enough to pass a test, but composition spelling usually remains erratic. The problems stem from poor auditory memory for sounds and/or poor visual memory for letters. The dyslexic student is frequently unaware that he or she has misspelled a word. This problem makes the teaching of spelling and provisions of accommodations and modifications more difficult because the student is unaware of his or her error.

Sub vocalization: Moving the lips quietly or, in some cases, inaudibly to rehearse a word before spelling it out loud or before writing it. This multisensory strategy helps the student "hear" in his or her own voice the word he or she is about to spell. This accommodation should be monitored carefully, since the student often omits, reverses, or transposes sounds and syllables when he or she repeats or say words. Teachers should initially listen to make sure the student is able to say the spelling word accurately. If the student is unable to say the word, it is sometimes helpful to use a small hand mirror and have the student echo your pronunciation while watching his or her own mouth in the mirror. If this practice is not sufficient for accurate pronunciation, collaboration with a speech pathologist should be considered.

Spelling check option: Checking, circling, or putting SP above words when writing. This strategy encourages the student to express ideas in writing without fear of embarrassment. This technique encourages better vocabulary in writing assignments, better word awareness and editing, and provides the teacher important information concerning the dyslexic student's spelling problems. The circled words can then become the focus of future spelling lessons.

Scratchpad practice page: Using a scratchpad to make certain the word is correct before writing it on the homework, test, or composition. This common adult strategy is often overlooked for students. Again, the scratchpads can be kept so the teacher can analyze them for future lesson planning.

Spell check partner: Pairing with a classmate to check each other's work for spelling errors. As with other cooperative learning or peer situations, care must be taken to insure that this activity is a positive experience and that both students are learning from the activity.

Frequently word spelling quick chart: Creating and using a list of spelling words known to give students problems. Frequently these words are homonyms that cause problems of usage, such as **there**, **their**, **they're**, or are words that are noted spelling problems. Be sure to personalize the list you create for the student so that it is age/grade appropriate. Guidelines for using the quick chart should be established.

Personal spelling problems quick chart: Creating and referring to a personal, ongoing list of words that give the student persistent spelling problems. The chart can be created from the circled words of their compositions, the scratchpad words, or from the teacher's observation. It is best to make the list special in some way. For instance, the list might be written on colored paper, have a special design, or be typed on the computer. Students should be encouraged to cross out words that no longer give them difficulty.

Spelling rules and generalizations chart: Using a quick chart that lists the major spelling generalizations and rules. The quick chart will be a reference for students to utilize before presenting the final draft of an assignment. It will help them to avoid common errors.

WRITING – HANDWRITING

Dysgraphia is a severe handwriting problem associated with dyslexia. Like dyslexia, dysgraphia is not something the student is able to change or control by "trying harder" or "caring more." This disability is sometimes difficult to understand, since the student who can not legibly write his or her own name, may be able to draw the most intricate creative picture, play the piano, or type well. The handwriting of the dysgraphic student is characterized as erratic, misshaped, and cramped. The act of writing is often laborious and time consuming. The student has no energy to attend to what is being written or to how the words are spelled. He or she appears not to remember how the letters are formed. Even when the student does remember the letterforms, his or her poor spelling may encourage poor handwriting. For instance, if the student does not know whether a word is spelled with an *a* or *u*, he or she will write the letter in such a way that the teacher can not recognize it. The "spell checking option" in computers helps to alleviate this problem. The increased availability of computers within schools will provide the dysgraphic student a tool that can assist him or her in schoolwork.

Slant form: Using a parallel-lined page underneath the writing paper to serve as a guide to help the writer keep the backs of letters straight and parallel. Often the straight lines (or down-strokes) of a dysgraphic student's handwriting are erratic and not parallel. Making the down strokes straight and parallel will increase handwriting legibility. Have the student place a piece of paper over a slant-lined page and write, making sure the down strokes of the letters are parallel to (not necessarily on) the lines of the slant form.

Personal letterform chart: Practicing with or referring to a chart as a reminder of the letterforms. A letter chart may be designed for the student who may be experiencing difficulty forming specific letters. The chart may contain the whole alphabet, including lower and upper case letters, if beneficial. Troublesome letters in cursive writing include *e*, *i*, and *t*; *a* and *o*; b and *k*; *g* and in manuscript, *b* and *d*; *p* and *q*; *m* and *n*. Primary grade classrooms typically have the alphabet displayed on the wall. A dysgraphic student needs a closer model. The teacher may reduce a chart for the student's use.

Change in writing form: Allowing the student to use the writing style that is the quickest and most legible style for him or her. This accommodation may mean switching from one style to another.

WRITING – COPYING

Copying is rarely taught as part of the language arts curriculum. However, because of its complex nature, copying is often a difficult task for the dyslexic or dysgraphic student. The language skills of reading, letter formation (handwriting), and spelling, as well as attention and memory, are required for accurate copying. For a student who cannot read, has difficulty forming letters, and cannot spell, the simplest copying activity becomes extremely difficult, confusing, and meaningless. In addition, the student is prone to make

types of errors in copying that he or she makes in reading, including reversals, substitutions, and omissions.
Computers may assist the student in routine copying activities. However, some academic copy work is essential. In addition, the ability to copy is a lifetime skill that cannot be entirely ignored or avoided. It is important to determine which academic copying activities are essential for the student and plan the activities accordingly. Also, copying skills should be taught to students as carefully as you teach any other language arts skills, and, whenever needed, accommodations and modifications for copying activities should be made.

Some common copying activities include:

- Final drafts of papers can be an important copying activity but may require more time for the student. The teacher might consider giving extra time or allowing only a portion of the final draft to be hand copied. In many cases, however, it is more realistic to allow papers to be typed and to use other activities for copy work practice.
- Prose or property passage for handwriting practice may be an important copying activity. The same notes apply as above. This activity may be preferable, since passages are generally shorter.
- Homework questions from a textbook are rarely a good copying activity. The large amount of time spent copying from the text is better spent learning the concepts of the textbook.
- Copying and writing errors in mathematics may include failure to keep numbers in columns or failure to separate the numbered list from the mathematical problem. These difficulties may lead a teacher to believe that the student is having trouble in mathematics when such is not the case. The teacher may consider keeping a master set of the textbook problems copied for the student or may consider providing enlarged print copies.
- Letters or notes to parents from the school may be an appropriate copying activity if the letter is short and is read to the student. However, the teacher should provide a "model" for copying.

Teaching Copy Procedures

Teachers should give the student specific methods and procedures for copying. Like other language arts skills, copying methods should be taught in a manner that is the same from teacher to teacher and from grade to grade. In addition, the complexity of activities should build over the years in much the same way reading or grammar skills are built over the years.

There are two types of academic copying: Copying from the far point and copying from the near point. Any copy-work done from the board or overhead is far point copying; copying from a textbook or papers on the student's desk is near point copying. The student should begin by copying from the near point models that have been enlarged and written in the same style that the student is expected to use.

The student should be taught to follow these step-by-step procedures for copying assignments:

- Have all materials ready
  - The textbook should be open to the correct page, or the board should be in clear, close sight.
  - The pencil should be sharpened or the correct color of pen should be in hand.

- Get the paper and near point copy work ready
  - The paper should be slanted in front of the student and the copy-work easily visible.
  - The student should position copy work so that it does not obstruct the writing page and does not have to be held. A bookstand may be needed for holding the textbook open to the correct page.
  - The heading and title should be written on the page before copying begins.

- Read or have someone read the passage
  - This activity should be repeated two or three times.

- Begin to copy
  - The student should first say, then repeat (for auditory reinforcement as well as for accuracy), the small groups of letters or words in the passage. This activity may be performed orally or sub vocally. If a student can not correctly name the letters or words, it is highly unlikely that he or she can accurately transcribe them.
  - The student should write letters/words that have been repeated. It is helpful for the student to name the letters of the words as they are written.
  - Initially, the student should copy small groups of letters (three or four, and progress higher. The student should not be asked to go beyond seven letters or seven words at a time).
  - Later, the student can build to single words, and phrases. When the student is able to copy by phrases, he or she should be taught how to read a prose passage with logical breaks and how to follow the rules for copying poetry.

- Check and correct the copy work
  - The student should be encouraged and given time to make sure the work has been copied correctly. This activity may be performed utilizing other students' assistance.
  - To note special difficulties, the teacher should watch the dyslexic student as he or she copies. The teacher's analysis of copying errors will help to design additional copying activities.

For all copying activities, patience on the part of the teacher, peers, and the student is very important. Praise for effort and encouragement for following procedures is also important.

WRITING - COMPOSITION

Some students may have difficulty expressing themselves orally. Many have good creative oral expression. Therefore, it is sometimes difficult to understand why a student may have difficulty expressing himself or herself in writing. Often, a student's written composition does not reflect the depth or range of his or her ideas. Much of the composition problem is related to the physical aspects of written language. If critical mental attention is devoted to the forming of letters and the spelling of words, then less attention is available for composing. If the student's writing rate is slow, then the creative and complex ideas are lost amidst the laborious task of writing them down. Other composition problems stem from organizational and sequencing difficulties. The student may have difficulty in separating subordinate ideas and in putting the ideas into a logical order.

Two key strategies for the teacher in helping the student with classroom composition skills are:

- Encouraging and nurturing the flow of ideas through accommodations that allow the ideas to be "captured" before being written
- Providing models for practice

Audio taping/transcribing: Using a cassette tape recorder to "capture" the ideas before they are lost. The student should be encouraged to make this accommodation a routine activity. The student, a peer, a parent, or a teacher assistant, depending on the assignment and the needs of the student, may perform transcribing and editing from the tape.

STUDY SKILLS FOR THE CONTENT AREAS

Marking a textbook: Using a specific system of marks or highlighting to organize the information for immediate understanding, and for tactile reinforcement. (Make copies of textual information to be used when the textbook cannot be permanently marked, and for later review.) Some students need this accommodation on a consistent basis for each subject. Some general guidelines include:

- Circling unknown words
- Underlining key words and phrases with a single or double line
- Bracketing information that is important but too long to underline
- Numbering super-ordinate, ordinate, and subordinate information (Roman numerals and Arabic numbers should be circled and used to designate the relationship of ideas)
- Numbering all main ideas
- Starring key ideas
- Placing a question mark by information that is unclear

Vocabulary deck: Using a personal and on-going word deck for vocabulary building. This activity may be conducted with written words and definitions or with pictures where

appropriate. The cards may be color coded by subject (i.e., blue for science, green for social studies, etc.).

ORGANIZATIONAL TECHNIQUES

Many students have problems with organization such as difficulty remembering what to do for homework, holding on to assignments once completed, and filing papers for future reference. Some also have difficulty using time efficiently. These students need special assistance with organizational skills. The key component for the success of organizational skills instruction is to have a detailed system and to be consistent in its use.

Assignment page: Writing homework assignments on a special page designed to help the student, teacher, and parents monitor the student's academic work. Various forms of assignment keeping systems are available. The key is to choose the one that is best for the student.

System of organization: Using a centralized system (usually a 1" to 2" binder) for maintaining all school paperwork. This activity prevents the student from becoming fragmented. The specifics of the system can be varied depending on the teacher's wishes; however, there should be only one system. If the student has multiple teachers, there will need to be coordination to provide consistency.

Study time monitoring: Keeping a written record of study activities and study time. This activity helps both the student and teacher keep track of how much time is spent on each academic task. Though the process does not need to be an ongoing activity, periodic monitoring will assist the teacher in determining which accommodations and modifications may be helpful for the student.

INTERVENTION AND IDENTIFICATION PROCESS

There are four phases within the intervention process to provide services to students with academic difficulties. These phases provide for evaluation and determination of program services within the regular education system to assist a student with dyslexia in becoming successful in the general education environment. The phases are designed to assist regular educators, students, and parents in meeting the expectations of educational requirements and to emphasize that all parties have a shared ownership in a student's attainment of academic success.

In order to meet the needs of a student, these phases are designed as steps to move through sequentially, as well as a process that allows flexibility depending upon the student's academic needs. These phases are structured to meet the requirements of federal regulations regarding students with disabilities and the implementation of educational practices to assist a dyslexic student in achieving academic success.

Depending on the academic difficulties a student is experiencing and the reasons for these difficulties, a student can be considered for services in any of the four phases at any given time. The completion of each phase is the responsibility of regular educators. If a determination is made to utilize federal program funding, the regulations concerning Section 504, IDEA, Title 1, as well as other relevant regulations must be adhered to in implementing services for students. Therefore, this intervention process is inclusive of a framework in which services can be planned and implemented, but the specifics of the individual student services are the responsibility of district personnel.

PHASE 1 – DATA GATHERING AND REVIEW

The first phase within the process consists of the gathering of data concerning a student who has difficulties with the language processing of reading, writing, and spelling in the regular education program in order to determine appropriate teaching interventions. Such interventions should be provided early in the student's regular education experience to avoid major academic difficulties. Academic problems can be documented in a variety of ways. Some include parent conferences, progress reports, individualized performance results from a testing program, and/or requests from parents and school personnel for assistance in meeting a student's needs.

In order for decisions to be made regarding appropriate academic interventions for students with diagnosed academic problems in reading, writing, and spelling, data must be gathered to include but not be limited to the following:

- Vision and hearing screening
- Medical history, if available
- Speech and language screening

- Academic progress reports
- Teacher reports of aptitude, behavior, and problems
- Informal curriculum-based assessment(s)
- Available standardized test scores
- Samples of the student's work indicating language processing problems
- Types of interventions currently used in the regular education program
- Results of basal reading series assessments
- Record of absenteeism and motivation to complete academic assignments
- Cumulative record including grade retention, previous grades
- Any additional information from parents and other sources

The information gathered regarding a student should be reviewed in order to design appropriate instructional interventions for the individual student by the student's regular education teachers, as well as other school personnel working with the student. Other school personnel could include remedial or compensatory teachers, guidance counselors, school nurse, curriculum supervisor, and/or principal. A Parent Interview Form and a Teacher Observation Checklist are provided in Appendices D and E to assist school personnel in the collection of data during this phase. These forms are NOT required.

It is recommended that districts have school-based Peer Coaching Study Teams to assist teacher and school personnel in determining interventions which are appropriate to meet the needs of students with learning problems. These teams consist of personnel within the school representing a variety of disciplines who can readily assist any teacher in developing interventions for a student experiencing academic problems. Research indicates these teams are highly effective in designing interventions that are successful for students. For further information on initiating Peer Coaching Study Teams contact the Mississippi Department of Education, Office of Reading/Early Childhood/Language Arts.

If the data indicates actions are needed such as rearrangement of class assignments, supportive counseling, tutoring, and/or language/speech therapy, appropriate procedures within the district must be followed to ensure the necessary support services are provided. Parents must be notified of the need for vision and/or hearing follow-ups to ensure correction in these areas are made.

This phase is not intended to meet Section 504 regulations but rather for regular education personnel to design instructional interventions to assist a student with academic learning within the regular education classroom. If a student attends remedial or compensatory classes, teachers in these classes should be involved with the decision to develop and implement instructional interventions. Collaboration and consistency in providing such interventions throughout the student's academic programs are essential. Without such collaboration and consistency the student is often taught using conflicting methods and interventions which are confusing and unsuccessful.

The design and implementation of instructional interventions in these phases of the process can be utilized to meet the requirements of regular education contained in the Preliminary to Child Study section of the Referral-to-Placement Process under the special education regulations. Instructional interventions are mandated to be implemented within the regular education system in most situation prior to a Teacher Narrative being completed to request a Child Study review by a Multi Disciplinary Team. Multi Disciplinary Teams must ensure instructional interventions are conducted and may request additional interventions be tried prior to determining the need to refer a student for Comprehensive Assessment.

PHASE 2 - INSTRUCTIONAL INTERVENTIONS WITHIN THE REGULAR/COMPENSATORY REGULAR EDUCATION PROGRAM

Once the instructional interventions have been designed, implementation should be initiated immediately. If the individualized interventions are successful, these efforts must be continued, as needed. Continuous review of the student's academic success should be made by the student's teacher(s).

If a student has not made the expected progress after implementation of the interventions and continues to have problems associated with language processing in the areas of reading, writing, and or spelling, district personnel should consider the need for an evaluation to determine if the student is dyslexic. First, district personnel must consider the following regarding the student to determine if an evaluation is warranted:

- The student must be exhibiting characteristics associated with dyslexia (see pages 6 and 7 for listing of characteristics)
- The student's lack of appropriate academic progress must be evidenced despite the utilization of instructional interventions
- The student must have adequate or above average intelligence or cognitive abilities
- The student must have received conventional regular education and instructional interventions
- The student's lack of progress in not due to sociocultural factors such as language differences, inconsistent attendance, and lack of experiential background, and
- The student's lack of progress has a constitutional origin, in other words, has an inborn developmental basis

District personnel should not refer a student for evaluation to determine dyslexia if any of the above factors are absent. If a student does not have exclusionary factors that would warrant other types of assessments, the student must be evaluated for dyslexia.

PHASE 3 – ASSESSMENT FOR DYSLEXIA AND RELATED DISORDERS

If a student is suspected of having a disability under the scope of IDEA and Mississippi special education regulations, then all special education procedures must be followed.

District policies should be reviewed to determine the procedures and process that should be in place in order to meet Section 504 requirements, including assessment procedures. If a student is not suspected of having a disability or is determined ineligible for a disability category within the scope of IDEA, he or she may have a disability within the scope of Section 504.

If an evaluation is conducted under Section 504 regulations, the 504 Coordinator (or designee as determined by district procedures) must develop an assessment plan and assign evaluation activities to a team of individuals qualified to conduct these activities. The parents should be contacted and informed about the assessment plan. Although parental permission is not required under 504, procedural safeguards under the regulations must be given to the parents.

Each district must provide an evaluation in accordance with the regulations in Section 504. Specifically, test and other evaluation materials must:

- Have been validated for the specific purpose for which they are used, and be administered in conformance with the instructions provided by their producer,
- Include materials tailored to assess specific areas of educational need and not merely materials that are designed to provide a single intelligence quotient,
- Be selected and administered so as to best ensure that, when a test is given to a student with impaired sensory, manual, or speaking skills, the test reflects accurately the student's aptitude or achievement level, and
- Include informal assessment information such as teacher observation, parent reports, and informal reading inventories.

In addition, evaluation data must provide information from a wide variety of sources, including aptitude and achievement test, teacher recommendations, physical condition, social or cultural background, and adaptive behavior.

Although individual district procedures will vary, many districts have much of the required evaluation data available without having to perform vast amounts of additional testing. Data collected during Phase 1 of the process can also be utilized during this phase of the process. However, if evaluation data are not current, new information may need to be obtained. Also, if a student was assessed under the special education regulations but was found to be ineligible for services, the data from the Comprehensive Assessment could also be utilized to determine a disability under Section 504. While standardized testing may be helpful and/or necessary to determining a student to be dyslexic, it is not necessary for all areas to be assessed using these types of instruments. A listing of Assessment Sources that could be utilized in the evaluation process is found in Appendix H of this Guide.

EVALUATION COMPONENTS FOR DYSLEXIA

- Data gathered during Phase 1 of the Process
- Hearing and vision screening
- An assessment of cognitive ability
- An assessment of skills in each of the following areas:
  - Auditory/visual perception
  - Oral expression
  - Letter identification
  - Word identification
  - Word attack
  - Oral reading comprehension
  - Silent reading comprehension
  - Spelling
  - Written expression
  - Handwriting
  - Math calculation
  - Math reasoning
- An assessment of social behaviors including attention span, self-esteem, and social skills
- Family interview which includes information concerning developmental and medical history

A written synopsis of the findings must be finalized and signed by the Special Education Study Teams. This report must address all the components of the evaluation and conclude with a summary indicating the evaluation results and whether it supports the criteria for determining the student as dyslexic.

CRITERIA FOR DETERMINATION OF DYSLEXIA

The evaluation results must meet the criteria listed below in order for a student to be determined dyslexic.

- The student has adequate or average intelligence demonstrated through performance in the classroom appropriate for the student's age, or on a standardized measure of cognitive ability.
- The student must exhibit some of the characteristics associated with dyslexia (as listed on pages 6 and 7) as determined through the evaluation. Consideration must be given to chronological age of the student in weighing these characteristics.
- The student demonstrated a discrepancy between achievement in the language processing areas of reading, spelling, and handwriting and other abilities.
- The student is not progressing satisfactorily within the regular education program even though conventional education has been provided with the support of instructional interventions and/or remedial assistance.

- The student's lack of progress is not due to sociocultural factors such as language differences, inconsistent attendance, and lack of experiential background.
- The student's lack of progress in not a result of injury, hearing loss, or visual loss.
- The student has completed at least one (1) year of kindergarten or formal education.

A student whose evaluation substantiates the above criteria will be considered to have dyslexia and/or a related disorder. Definitions of each related disorder are contained in the Glossary of Terms (see Appendix C).

PHASE 4 – MULTISENSORY REGULAR EDUCATION PROGRAMMING

Once the identification of dyslexia and related disorders has been made, the district must provide an appropriate program for the student. Instructional strategies utilized within the regular education system must be based on individualized intensive multisensory methods containing writing and spelling components. Multisensory program descriptors explained beginning on page 30 of this guide, include: individualized, multisensory, language-based, intensive phonetic, synthetic phonics, linguistic, meaning based, systematic, sequential, cumulative, and process oriented descriptors.

Students may have such services provided in various settings based on educational needs. Information regarding program options is found on pages 33-53 of this guide.

A student who has been identified as dyslexic using Phase 3 of this process is considered to have a disability under Section 504 of the Rehabilitation Act of 1973. Decisions regarding the student's placement and determined program must be made by a team of persons knowledgeable about the student, the meaning of the evaluation information, and the placement options. This 504 Accommodation Team of district personnel must design an appropriate education that meets the education needs of the student as adequately as the needs of students with no disability. The team must also ensure that placement decisions are based on the least restrictive environment requirements and are appropriate for the individual student.

Questions and answers that assist in describing the relationship between dyslexia and Section 504 are found in Appendix H.

PROGRAMS FOR THE TREATMENT OF DYSLEXIA

Once the identification of dyslexia or a related disorder has been made, the school district must provide for the delivery of services to a student so identified. Remediation should be provided in an appropriate multisensory, systematic language-based regular education program or programs.

No one remedial reading method works for all dyslexic students. Therefore, it is important that the teacher have mastery of many different techniques. There is no single formula for treating a dyslexic child. Each dyslexic child requires his or her own individual program.

Multisensory programming may be provided in regular classes, remedial classes, or a combination of both. The major instructional strategies should utilize individualized intensive multisensory methods and should also contain writing and spelling components.

The Mississippi Department of Education has not approved a list of recommended programs. Any program used should meet the descriptive characteristics listed below. A Multisensory Program Review Form (See Appendix F) is provided for use in the evaluation of various programs to determine each program's characteristics and effectiveness.

Program Descriptors

An effective program for students with dyslexia should include the following descriptors:

- Individualized – refers to the personalization of instruction to student ability levels, interests, and learning styles.
- Multisensory – refers to the combined use of visual, auditory, kinesthetic, and tactile senses to reinforce learning.
- Language-based – refers to the relating of all aspects of language into meaningful settings.
- Intensive phonetic – takes advantage of the letter-sound plan in which words that carry meaning are made of sounds; sounds are written with letters in the right order.
- Synthetic phonics – sounds of letters can be blended into words for reading, and the words can be divided into the component sounds for spelling and writing.
- Linguistic – based in proficiency and fluency with the patterns of language so that words and sentences are the carriers of meaning.
- Meaning based – directed toward reading comprehension and/or written composition.

- Systematic, sequential, cumulative – material is organized and presented in a logical way that fits the nature of language. The material teaches a student to read, write, and spell by building on what the student already knows.
- Process oriented – places emphasis on the processed as much as on the product.

Currently, no existing reading program meets all the instructional requirements for all dyslexic students. Educators must be prepared to add missing instructional components.

In choosing a dyslexia program, school personnel should ensure it meets the descriptors previously mentioned. In addition, the district should answer the following questions. Affirmative answers will ensure a high quality dyslexia program.

- Was the program specifically designed for students with dyslexia?
- Was the program developed by a person with extensive training and experience in teaching students with dyslexia at all age levels and with varying degrees of severity?
- Does the program provide criteria for evaluation student progress?
- If the program meets all descriptors with the exception of being multisensory, does the teacher have the in-depth training and experience to make in multisensory?
- Does it include spelling and writing components?
- Does the program provide ample opportunity for review of previous learning?
- What class setting is recommended for delivery? What is the recommended teacher/student ratio? Is it cost effective? Is it reasonable for your district?
- Does the program provide for training of instructors to implement the method?
- Is there curriculum coherence between grade levels and between the remedial classroom and the regular classroom?
- Does the program require the student to be remediated in skills that they are lacking?

Avoid programs that:

- Teach only the whole word approach
- Require students to work on their own
- Teach rote memorization of spelling list
- Do not use multisensory teaching
- Do not use structured sequential phonics approach

Programs that are most effective in teaching dyslexic students involve:

- Multisensory and discovery learning
- Synthesizing phonics with regular rules and sound-letter relationships
- Scientifically structured, sequential instruction
- Daily review to ensure success for every kind of learner

Once dyslexia is identified, it is essential that the student understand his or her learning differences. Explaining to dyslexic students that they do not have the same kind of memory for words as most people is an important step in helping students understand their learning differences. Dyslexic students must also understand that with special teaching techniques they can learn the basic skills of reading, writing, and spelling.

Multisensory learning is necessary because it involves the simultaneous use of the three main learning modes: visual, auditory, and kinesthetic (muscle movement). Students who have visual memory problems can make and retain connections between oral and written language only if the auditory and kinesthetic learning modes are utilized in language training.

Much review is also necessary in any effective program for teaching dyslexic students. Most normal learners rely on visual memory to recall words and letters. However, the dyslexic student must see, hear, and feel the sound, name, and shape of a letter hundreds of times before the sound-letter relationship is ingrained in his or her memory.

Another effective method for the introduction of new letter/sound relationships is the discovery method of learning. Rather than telling the student the sound of a letter when introducing it, the teacher presents several words beginning with that sound and has the student identify the sound. This process makes the student an active participant in learning. It also allows the student to make a connection between prior instruction and new instruction.

Intensive instruction in phonics is essential for dyslexic students. Students cannot learn to spell by memorizing weekly word lists and cannot learn to read by the sight-word method if they have an ineffective visual memory. However, they can and must learn the phonetic units that represent speech sounds. Therefore a structured, systematic phonics program should be taught in a logical and cumulative progression.

Practical Considerations

An important consideration in planning a program for dyslexic students is the school's current regular education reading program. Does the school use a basal reading program and how much flexibility is allowed? It must be decided whether the dyslexia remediation program chosen will be used in conjunction with the regular reading program or in place of it.

Attitudes of administrators, teachers, and parents will impact the implementation of any remedial treatment program. Dyslexia awareness training must be made available to all personnel. The level of concern for all disabled readers will directly influence the success of any program for all students with dyslexia.

Teacher training is another issue that will influence the choice of any program for students with dyslexia. Training requirements vary greatly among dyslexia programs.

Teacher training may be one of the largest expenses in program implementation. A district must choose a program that has teacher training requirements that are reasonable, ongoing and cost effective for the district.

Placement

One of the primary factors to consider in planning a reading curriculum for dyslexic students is the academic setting in which services will be provided. In considering placement options, one must consider the number of students who will be served and the recommended teacher-to-student ratio of the program being considered. Scheduling and course considerations are also important concerns, especially in the secondary grades.

The dyslexic student should be served within the regular education program with recommended modifications in most instances. Options for placement may include the following:

- Regular class placement with curriculum modifications and specialized accommodation and modification strategies,
- Multisensory program services provided within the regular classroom or alternate setting,
- Specialized individual or small group tutoring,
- Remedial class setting, or
- A combination of these options or any additional arrangements that may be developed by the placement team.

If a parent or district does not agree with student placement or provision of services, either party may pursue the resolution of this issue through the due process procedure as outlined in Section 504 of the Rehabilitation Act of 1973.

A periodic review must be made to determine the appropriateness of the program for the student. However, a review may be conducted at any time that the student does not appear to be making adequate progress.

While dyslexia treatment programs meeting the outlined criteria are effective for most children with mild to moderate dyslexia, there will be some students with severe dyslexia or related disorders who will be unable to make adequate academic progress. In such cases, a request for Child Study to determine whether a referral to special education services under IDEA is warranted. Dyslexia is included as a "specific learning disability" under IDEA.

MULTISENSORY SYSTEMATIC LANGUAGE-BASED PROGRAMS

Listed below are programs that are currently being utilized to provide services to students with dyslexia. The Mississippi Department of Education does not endorse or recommend these programs. It is imperative that district personnel thoroughly evaluate all aspects of a program prior to considering purchase.

Company addresses, phone numbers, cost comparisons, and grade levels served are listed as available. Please be advised that the information below is subject to change.

PROGRAM	COST	GRADES
ALPHABETIC PHONICS Educators Publishing Service 31 Smith Place Cambridge, Massachusetts 02138-1000 1-800-225-5750	Call for prices	K-12
ASSOCIATION METHOD Maureen K. Martin, Ph.D. Dubard School for Language Disorders The University of Southern Mississippi Box 10035 Hattiesburg, MS 39046-0035 (601) 266-5223	Training: 3 semester hours course- $361 academic credit $250 non –Credit Textbook-$52.50	Pre-K- Middle School
KURZWEIL 3000 Contact Person: Bob Dixon Assistive Learning Technology P.O. Box 14607 Monroe, LA 71207-4607 Toll Free: 1-888-388-2556	Price Depends on Product Purchased Free on-site demonstration is available upon request.	Focus: 2 - College
AUDITORY DISCRIMINATION IN DEPTH Lindamood-Bell Corporate Headquarters 416 Higuera Street San Luis Obispo, Ca 93401 1-800-843-8855 (Catalog of Materials) 1-800-233-1819	Consultant- $500/day (plus expenses) Materials- $328.25/Kit (per 20 pupils) Training-approx. $700/person	K-Adult
CLASSROOM PHONICS / SAXON PHONICS Saxon Publishers Inc. 1320 West Lindsey Street Norman, Oklahoma 73069 1-800-284-7019	Consultant- $200/1 day workshop + expenses Materials-Kindergarten Kit-$65 Teacher-$60 Student- $14	Focus K-2
DISTAR/CORRECTIVE READING Association for Direct Instruction P.O. Box 110252 Eugene, Oregon 97440 503-485-1293	Price List Available upon request	K-12

HERMAN METHOD Romar Publications, Inc. 4700 Tyrone Avenue Sherman Oaks, CA 91423 818-784-9566	Training $150/teacher Materials- Set A $380 Set B $420 Computer Software (Optional - $ 150)	8 years -Adult
LEAD PROGRAM LEAD Educational Resources 144 Main Street Bridgewater, CN 06752 203-355-1516	Training- $150/Person Materials- $360	Developmentally K-3 Remedial 1-6
MULTISENSORY TEACHING APPROACH Educators Publishing service 31 Smith Place Cambridge, Massachusetts 02138-1000 1-800-225-5750	Training -$250/teacher- 30 teachers Consultant-Travel	Ungraded
MULTISENSORY TEACHING TECHNIQUES Menninger Center for Learning Disabilities P.O. Box 829 Topeka, KS 66601 913-273-7500	Consultant-$600/Day (plus expenses) Materials-$30/teacher	1-12 and College
ACADEMY OF ORTON-GILLINGHAM PRACTIONERS AND EDUCATORS P.O. Box 234 East Main Street Amenia, New York 12501 1-919-373-8919	Price List available upon request	K - 12
PROJECT READ Language Circles Enterprises P.O. Box 20631 Bloomington, MN 55420 1-800-450-0243	Materials –Teacher Manual- Approx. $45 Supplementary Materials- $15-$75	K-6
RECIPE FOR READING Mrs. Connie Russo 323 Concord St. Dix Hills, NY 11746 516-242-8943	Price List available upon request	1-3
SLINGERLAND APPROACH Educators Publishing Service 31 Smith Place Cambridge, MA 02138-1000 1-800-225-5750	Training -$550/Person Materials- $100/teacher	K-12
MISSISSIPPI LIBRARY COMMISION Library for the Blind & Physically Handicapped 5455 Executive Place Jackson, MS 39206 Cindy Nugent 1-800-446-0892	Free Books on tapes for the blind and dyslexic	K-Adult
SRA CORRECTIVE READING SYSTEMS P.O. Box 543 Blacklick,OH 43004-0543 1-800-843-8855	Price List available upon request	4-12

TEXAS SCOTTISH RITE DYSLEXIA TRAINING PROGRAM Texas Scottish Rite Hospital 2222 Welborn Street Dallas, TX 75219 214-559-7800	Materials-$2,500/336 1Hr. Tapes	2-12
TEXAS SCOTTISH RITE DYSLEXIA LITERACY PROGRAM Texas Scottish Rite Hospital 2222 Welborn Street Dallas, TX 75219 214-559-7800	Materials- $1,500/160 1 hr. Tapes	Secondary
VISUALIZING AND VERBALIZING FOR LANGUAGE TRAINING PROGRAM Lindamood-Bell Learning Processes, Inc. (See Auditory Discrimination in Depth description)	Training -$85/person Consultant- $500/day (Plus expenses) Materials-$35.12/manual	Unavailable
WILSON LANGUAGE TRAINING PROGRAM Wilson Training Center 162 W. Main Street Millbury, MA 01527 1-800-899-8454	Training- $1,600/2 days (Plus travel) Certified Training- $600/person Materials- $196 Kit	5- Adult
THE WRITING ROAD TO READING Spalding Foundation 15410 North 67th Avenue, Suite 8 Glendale, AZ 85306 1-602-486-5881	Training -$40/person Materials- $132/25 Students	Pre-K-12
WRITING TO READ (IBM) Instructional Business Machines, Eduquest Office 1-800-772-2227	Contact Local IBM Representative	K-2
TEACHERS AND TOOLS (TNT) Contact Person: Clyde Scarbrough 3954 Demetropolis Road Mobile, Alabama 36693 1-800-826-4614	Prices vary with products Stand Alone Lab Packs and Network Version available Free Catalogs and demonstrations available	Focus: K- Adults
READING PLUS Contact Person: Tommy Richard Taylor and Associates/Communications 200-2 E. 2nd Street Huntington Station, NY 11746 1-504-461-0777	Price List available on request	K-12
LANGUAGE ! Sopris West 4093 Speciality Place Longmont, CO 8054 1-800-547-6747 www.language-usa.net	Catalog/training information available upon request	1-12
LAUNCHING LITERACY WITH LANGUAGE! Sopris West 4093 Speciallty Place Longmont,CO 80504 1-800-547-6747 www.language-usa.net	TO BE DETERMINED ANTICIPATED RELEASE 2002	K-3

DESCRIPTIONS OF PROGRAMS FOR DYSLEXIC STUDENTS

The descriptions below should be taken as overviews rather than comprehensive investigations. The Mississippi Department of Education has not attempted to compare the programs or single out the "best" program.

ALPHABETIC PHONICS

Alphabetic phonics is an adaptation of the Orton-Gillingham multisensory approach to teaching dyslexic children. It may be used in small group settings or one-on-one tutorials.

This program began in the mid 1960's at the Scottish Rite Hospital in Dallas, Texas. Alphabetic Phonics is based on Samuel Orton's theories about dyslexia and incorporates multisensory activities to provide linkage between visual, auditory, and kinesthetic senses.

The term alphabetic phonics refers to "a structured system of teaching students the coding pattern of the English language." The curriculum is highly structured and sequential. Students are taught a set of vocabulary that refers to the language terminology used in the program. They are also taught a set of code marks that indicate speech sounds of letters, as well as symbols and abbreviations used for word decoding. In addition, they are taught a set of six formulas for spelling words and a set of four formulas for syllable division.

The structured daily lesson takes an hour to complete. Introduction of each new element begins with discovery and is reinforced with multisensory techniques. Reading Deck and Spelling Deck flashcards are used. Each daily lesson includes practice in reading (decoding skills), spelling, and handwriting. Practice in verbal expression, building comprehension skills, and listening to good literature is also included.

Cursive handwriting is taught from the beginning and much emphasis is placed on teaching cursive letter formations. It is felt that cursive handwriting encourages left-right directionality, as well as sound blending.

Teacher training for Alphabetic Phonics is extensive and demanding. Teachers must attend a four-week introductory summer workshop and a two-week advanced workshop the following summer. These daily workshops are seven hours in length. In addition, substantial reading and take-home projects are assigned. Teachers are not officially certified as Alphabetic Phonics teachers until the two-year training program is completed.

ASSOCIATION METHOD

The Association Method is a phonetic multisensory teaching-learning strategy that was designed for language deficient children. Devised originally by the late Mildred McGinnis, a teacher at Central Institute for the Deaf in St. Louis, this method has been utilized for more than forty years in the University of Southern Mississippi.

Although originally designed for children with severe language/speech disorders and/or hearing impairments, the method has been modified and expanded and has been used effectively with other populations, including the learning disabled, dyslexic, and severely communicatively disordered. The principles of the Association Method, with appropriate modifications, have also been used with non-disabled children to establish a code-breaking system for reading skills and may be used effectively in regular elementary classes.

The Association Method used the Northampton Symbol system for teaching sound-symbol relationships for reading. Cursive writing is used for initial instruction. Children learn to read manuscript, but write only in cursive. The method is incremental and systematic. Instruction progresses from the teaching of individual sounds to syllables, words, and sentences. When sufficient language skills have been achieved, a transition is made to traditional textbook formats for instruction. Skill in phonetic rule is not needed to establish reading proficiency through the Association Method.

A minimum of a three-semester hour course, or the equivalent, is recommended for initial preparation. This course is offered through the University of Southern Mississippi and is available in a one-week format during the summer. Contractual services are also available for consultation and teacher training at other sites throughout the year.

KURZWEIL 3000

The Kurzweil 300 reading System was specifically designed to address the needs of students with reading difficulties. The system scans virtually any printed document and then converts the printed words into audible speech. The student can choose to listen only, or to both listen and see the text and graphics on a multi-functional screen.

This system addresses numerous learning disabilities resulting from difficulty in using spoken or written language. Targeted disabilities include dyslexia, dysgraphia, ADD, ADHD, and students experiencing problems with short-term memory (losing site of their goal due to the length of time it takes to decode or spell a word). The Kurzweil 3000's multi-sensory approach helps students acquire content knowledge by stressing the relationship between auditory and visual input in learning to read.

The Kurzweil 3000 can be used within any curriculum or teaching methodology.

AUDITORY DISCRIMINATION IN DEPTH (Lindamood-Bell Learning Processes)

Auditory Discrimination in Depth was developed by Charles and Patricia Lindamood as a preventive, developmental, or remedial program to teach auditory conceptualization skills basic to reading, spelling, and speech. This program is designed to compliment existing reading programs. Although it is targeted at primary age children to bolster the development of auditory-perceptual awareness, it may be used with children and adults who fail to read and spell successfully due to lack of phonemic analysis skills.

Students are taught to listen selectively and to make judgements about sounds. They are then taught to identify and classify speech sounds. Students then learn to track sounds in nonsense words and look for patterns. Only after a student is proficient at encoding nonsense words in this manner are letter symbols introduced.

Students use letters printed on tiles for spelling activities and finally progress to writing letters themselves. Real words are introduced. Reading or decoding is introduced in the same manner, beginning with letter tiles and progressing to written words. Limited coverage is given to reading comprehension in this method.

The Auditory Discrimination in Depth technique is designed for classroom use with small homogenous groups or in tutorial settings.

Teacher training is conducted in two five-day, nine-hour seminars. The first seminar teaches theory and demonstrates concepts and techniques. The second seminar teaches practical application of concepts and techniques. Training is offered at the Lindamood Language and Literacy Center in San Luis Obispo, California. They also offer a two-week inservice training workshop at the center to train teachers to present training inservice in their districts.

Studies have shown this program to be effective in raising reading scores, especially if the program is begun in kindergarten or first grade.

DISTAR AND CORRECTIVE READING

DISTAR (Direct Instructional System of Teaching Arithmetic and Reading) was developed by Wesley Becker and Siegfreid Engelmann at the University of Oregon in 1968 as one of nine instructional models to be used in a government-sponsored projects to evaluate the effectiveness of promising educational programs for disadvantaged children in the primary grades.

Although it was originally designed for disadvantaged children, DISTAR has been used to teach children with a variety of constitutional disabilities, including specific learning disabilities. The program is now published by Science Research Associated, Inc. (SRA) and is formally referred to as SRA's Direct Instruction Program.

The language program consists of three levels. The first level focused on teaching the language of instruction, building vocabulary, developing oral language skills, and establishing the foundation for logical thinking. The second level deals with reading comprehension, emphasizing reasoning skills, following directions, and meanings of words and sentences. The third level deals with mechanics, both spoken and written sentence analysis, and informational content.

Teacher training is conducted in a one-week pre-service workshop, followed by one to two hours of in-service training a week until mastered. The training procedure involves demonstration, guided practice, and feedback. Trained teachers often supervise apprentice teachers within the classroom.

Corrective Reading is an extension of DISTAR developed for students in fourth through twelfth grades that have not been successful in other reading programs. Corrective Reading was developed to compensate for a wide range of reading deficiencies including mild mental retardation, neurological impairment, emotional disturbance, socio-economic deprivation, and language and cultural differences, as well as dyslexia or learning disabilities. This program may be used in both special and regular education settings and is intended as a core rather than supplementary reading program.

HERMAN METHOD

"The Herman Method for Reversing Reading Failure" is a multisensory remedial reading curriculum that evolved from the Orton-Gillingham philosophy and includes the instructional methods developed by Renee Herman as she worked with dyslexic students in a public school from 1964 to 1973.

The program includes reading, writing, spelling and handwriting components and is designed for dyslexic students age eight through adult. Although it is based on the Orton-Gillingham model, the Herman Method incorporates a number of instructional strategies and techniques that are unique to this program.

The Herman Method utilizes deliberate, simultaneous input to both cerebral hemispheres. Such techniques as bimanual/bipedal writing, mirror feedback, multisensory left-right tracking, and rhythmic activities are used in introduction of skills. The child practices a letter with the preferred hand, the other hand, and then both hands simultaneously. Input to both cerebral hemispheres is effective with dyslexic students. Multisensory and bi-hemispheric techniques such as "velvetized letters" and "blind writing" are also used.

The Herman Method includes specific instructional techniques to help students compensate for auditory as well as visual misperceptions. Dyslexic students with auditory discrimination problems use a mirror to "see and feel" the difference in the letter sounds.

The method also includes metronome pacing to encourage fluency in reading and writing and a wide variety of review opportunities to maintain student interest. These include

reading filmstrips, work cards, phrase lists, sentence cards and stories, reading games, workbook exercises, and computer software.

The reading curriculum encompasses decoding and encoding skills, sight word recognition, structural analysis, use of contextual clues, dictionary access skills, decoding of diacritical symbols, and the complete spectrum of comprehension skills. It has been show to be successful with students of varied ethnicity, including Caucasian, African-American, and Latino. Reading proficiency is dependent on the completion of the program with takes approximately three years.

Teacher education is a primary focus of the Herman Method Institute. Student success is closely linked to teacher success. Renee Herman is available to present Herman Method awareness sessions for teachers and administrators of students diagnosed as dyslexic at not cost or obligation to school districts. In addition, the Institute conducts seminars and practicums for educators in the learning disability field and offers a three-day teacher education program presented by a trained Herman Method Consultant.

"The Herman Method for Reversing Reading Failure" provides schools with a cost-efficient multisensory reading curriculum and a reasonable teacher-training program. The program is unique in that it can be effectively taught by paraprofessionals with the supervision of a credentialed teacher.

MULTISENSORY TEACHING APPROACH (MTA)

The Multisensory Teaching Approach is a revision of the Alphabetic Phonics curriculum, which was developed by Margaret Smith and Edith Hogan, both former Alphabetic Phonics teacher trainers. This program can be incorporated into other reading programs in regular classrooms, or used as a remedial program for dyslexic students.

Teacher training is less extensive than that of Alphabetic Phonics and involves a two-week, daylong basic course, which includes lectures, daily practicum, and observations. The training is offered by Edmar Educations Services in Dallas, Texas.

Smith and Hogan have developed a resource kit that contains the essential instruction manuals and materials needed for teaching the program. The MTA kit is distributed by Educations Publishing Service in Cambridge, Massachusetts.

A four-year study of the MTA program in Texas indicated significantly greater progress in reading and spelling children receiving the MTA instruction than in those who did not receive this instruction. The amount of gain tended to increase with the number of years of MTA instruction.

THE ORTON-GILLINGHAM APPROACH

Dr. Samuel T. Orton, a neurologist and psychiatrist, could well be called "the father of dyslexia" in America. In the mid 1920's, Orton became interested in reading problems

through the study of children referred to his mental hygiene clinic in Iowa. These students were thought to be behavior disordered or "word-blind."

He identified the syndrome of developmental reading disability, separated it from mental defect and brain damage, and offered a physiological explanation with a favorable prognosis. He fully outlined the principles of remediation, which still stand today. Thousands of disabled readers have been helped to overcome their disabilities with his method.

His professional associate, Anna Gillingham, assumed the task of organizing the teaching procedures for the various syndromes. Miss Gillingham developed a complete remedial program that she called "the alphabetic method." With the help of her friend and remedial reading teacher, Bessie W. Stillman, Gillingham published the now classic Gillingham-Stillman manual, entitled, Remedial Training of Children with Specific Disability in Reading, Spelling, and Penmanship in 1946. While this program, as it was originally written, is not often used today, it remains the basis of many current programs for the treatment of dyslexic children.

The Orton approach to developmental dyslexia has always emphasized treatment. Applying multisensory techniques that provide for simultaneous association of visual, auditory, and kinesthetic language stimuli, the Orton-Gillingham approach "retrains" the student in reading, spelling, and handwriting.

The Orton-Gillingham technique is based upon constant use of association of how a letter or word looks, how it sounds, and how the speech organs or the hand in writing feels when producing it.

The pupil is shown the printed letter symbol and repeats its name after the teacher. The sound is made by the teacher and repeated by the student.

The student watches while the teacher makes the letter and explains its form. He or she then traces over the teacher's model. The next step is to copy, then write from memory, and finally write with eyes closed or averted. Many stimulus-response drills are used to strengthen linkages.

Once the student has learned the names of the letters, their sounds, and how to write them, the process of blending sounds to make words begins. Blending is the basis for reading. Much daily drill and review is required. Both letter cards and words are used.

Soon after blending is started, the analysis of words into component sounds should begin. The teacher pronounces the word, separating the sounds, and the child repeats each sound, names the letter, identifies the letter card, and then writes the word.

The selection of reading materials must be controlled for some time to allow the student to fully assimilate his newly acquired phonetic skills. The amount of required reading, especially for older students, should be limited so that the student will not be forced to

sacrifice accuracy or give up newly acquired skills before they have become dependable habits.

Provision should be made for the dyslexic student to have parts of assignments read aloud to him or her, to dictate compositions and take oral exams as long as it is necessary. The dyslexic student should be given early training in the use of the dictionary and must expect to depend on it for many years to come.

Several teachers who were associated to some extent with Dr. Orton or with Miss Gillingham have produced programs based on the teaching methods of the original Orton-Gillingam approach. These programs are currently being used successfully in school districts across the nation.

Project Read

Project Read was developed in 1969 by Mary Lee Enfield and Victoria Greene in the public schools of Bloomington, Minnesota, as an alternative for children who were not benefiting from the basal reading program. It originally began as a three-year experimental program to deliver direct, systematic phonics instruction within the regular classroom and targeted children who were performing below the 25th percentile in reading and spelling.

Project Read was designed to be an early intervention program for grades one through six. However, extensions of the program, covering reading comprehension and written expression, as well as phonology, are appropriate for intermediate and secondary students who are weak in these areas.

The program is effective as an alternative to the basal reading program, as well as a remedial approach. It may be used in the regular classroom or in a special setting. In many districts it is used as a collaborative effort between regular and special education.

Project Read is a total reading/language arts program that consists of three interwoven components:

1. Phonology- Instruction in basic phonics knowledge provides systematic sequences of skills and concepts that are covered in a series of sixty lessons. Specific techniques, many of which are multisensory, are described for teaching these skills.
2. Comprehension- Focuses on reading comprehension and vocabulary development and begins when a student has mastered basic decoding skills.
3. Written Expression- Focus in this phase is on teaching sentence structure and paragraph development. Handwriting instruction is not included in the program.

The primary teacher training strategy is through model teaching. The classroom teacher is trained by a Project Read Teacher going into the classroom and demonstrating the curriculum and technology with the identified group of students as the classroom teacher

observes. After a period of time the classroom teacher resumes teaching the group, and the demonstration teacher returns periodically to give ongoing support.

Project Read appears to have reasonable training requirements and is cost effective as well. The cost per Project Read student is approximately 10% of the cost of funding a special education student in a "pull out" program. The majority of students are taught in the regular classroom by the regular classroom teacher.

Project Read has been found to be effective in remediating the reading problems of students with dyslexia. It has been implemented in many public school districts throughout the United States and Canada.

RECIPE FOR READING

Recipe for Reading is another adaptation of the Orton-Gillingham approach, and is designed for one-on-one tutorial use. It was developed in the 1950's by Nina Traub and first used in Ossining, New York.

This method applies a synthetic phonics approach, teaching individual letter sounds in isolation before introducing syllables or words. Teaching follows a part to whole progression. The program is based on the premise that learning disabilities varies among children, and reflects problems in visual, auditory, or tactile domains. Instructions should be geared to modality strengths.

Although the program was not originally designed for dyslexic students, and the term multisensory does not appear in the manual, the use of visual, auditory, and kinesthetic reinforcement techniques is encouraged throughout the program. A sequence is encouraged throughout the program. A sequence is used for introducing letter sounds based on their visual, auditory, and kinesthetic characteristics.

Recipe for Reading is designed for first through third grade students and suggested delivery is on a one-on-one basis outside the classroom in half-hour session's five days a week. Letters are introduced in a logical sequence with many suggestions of multisensory techniques. Both manuscript and cursive letter formation are taught simultaneously. Spelling precedes reading in this method. After the student has learned the sound and name for the letters, basic spelling patterns are taught. After the student spells words, he or she is asked to read them on flash cards and then progresses to phrases and sentences.

The lessons' sequence begins with drill on previously learned letter sounds. New materials are presented using the methods described above, and depending on the student's ability level, word reading, sentence reading, and book reading follow in order. The lesson is ended with phonetic word games played for reinforcement of learning and to provide the student with success.

The Recipe for Reading method is often used within the special education framework, in resource rooms, and in self-contained classrooms. Although it is designed for one-on-one use, it is also effective in small groups of up to five students. An expansion of the curriculum is being written to include upper elementary, junior high and high school students.

Teacher training is usually provided within a school in daily, five-hour sessions over a two-week period. The training includes lecture, actually tutoring students under supervision, and sharing sessions.

THE SLINGERLAND PROGRAM

Beth Slingerland developed the Slingerland Program in 1960. It is an adaptation of the Orton-Gillingham approach designed to be used with whole classes of students. The Slingerland Program is based on the premise that language depends upon intersensory functioning. Multisensory activities are incorporated into all levels of the program to provide for the development of visual, auditory, and kinesthetic associations.

Slingerland training begins with learning to write. Children learn to manuscript letters and are provided multisensory practice. After learning to write a letter, the students are taught the letter sound alone with its key word. Manuscript letters are taught in the primary grades and cursive formation is taught later.

The Slingerland curriculum is divided into two components. In the Auditory Approach the stimulus is presented orally leading to blending and spelling. In the Visual Approach the stimulus is presented in written form, which leads to reading. This format provides the structure for the linkage of the modalities. It also builds from the single unit to the more complex.

Since the vowel sounds is often the stumbling block for unlocking the word, the Slingerland approach teaches the student to decode the vowel sound first and then proceed with blending or decoding the rest of the word.

The Slingerland Program materials provide screening materials which make it possible to screen from among a group of children those who are beginning to show difficulties in the area of language and those with specific language disabilities. The screening instruments can be given to as many as fifteen students at one time. Each test takes between one and two hours to administer.

The screening tests are usually administered at the end of kindergarten or the beginning of first grade. Children identified as having specific language disabilities, or those at risk for language disabilities, received Slingerland instruction in place of the traditional language arts curriculum. Most remain in Slingerland classrooms for at least two years.

The Slingerland Institute sponsors teacher education courses during the summer. The sessions are four weeks in length and present a totally integrated language approach

including oral language development, organization, phonics, encoding, decoding, spelling, written expression, and reading comprehension. The training includes classroom demonstration with children taught by Slingerland staff teachers and allows for practice of the techniques under staff guidance. The training can be taken for university credits where available.

TEXAS SCOTTISH RITE HOSPITAL FOR CHILDREN DYSLEXIA TRAINING PROGRAM

The Texas Scottish Rite Dyslexia Training Program is a videotaped series of lessons presenting a curriculum designed to teach the structure of written English to elementary school-aged children in public schools who would not otherwise receive appropriate remediation. The total program consists of five program orientation tapes, 336 one-hour instructional tapes (VHS), and 14 Progress Measurement tapes.

The Dyslexia Training Program is actually a taped version of the Alphabetic Phonics method, which was developed at the Texas Scottish Rite Hospital under the direction of Lucius Waites, M.D. and Aylett R. Cox. The Program is based on the Orton-Gillingham principles.

A veteran therapist teaches and directs the lesson while a facilitating team teacher in the classroom assists and monitors the students' activities throughout the lesson. The classroom instructor, or team teacher, does not have to be trained in the method since the teacher on the video actually does all of the presenting. However, the team teacher is responsible for monitoring and recording student performance.

The program was designed for the use in a class of no more than six students. It was prepared for students in second through fifth grade. Because instruction is cumulative and sequential, classes should always begin with the lesson #1 and continue daily throughout the two years series. Students may not enter after the program is in process. For this reason, districts may want to begin another class at mid-term to accommodate new students.

In addition to a television, VCR, and the videotapes, some student materials are required, such as workbooks, plastic letters, and special writing paper, and writing frames. These materials may be purchased through Educator's Publishing Service.

The Dyslexia Training Program does include multisensory introduction of new learning, intensive instruction in the alphabet, graphemes and phonemes, and listening and reading comprehension. It provides for reading practice, handwriting practice, spelling practice and sequential daily review. Cursive handwriting is taught from the beginning.

TEXAS SCOTTISH RITE HOSPITAL FOR CHILDREN LITERACY PROGRAM

The TSRH Literacy Program is an instructional video series of lessons, which consists of five orientation tapes and 160 one-hour instructional tapes (VHS). This program uses the

same principles of the Dyslexia Training Program and adapts them for use secondary students. The program is designed for the student who has passed his 14 th birthday.

The program is designed to teach reading, writing, and spelling to high school students and adults who have not had the opportunity to learn in a traditional setting. Students reading at 3rd grade level or below should be grouped together and those reading at 4th grade level and above should be in a separate group. The students should be in a class of no more than 10 students.

Because of the emphasis on intense phonetic analysis of written language, the program should be utilized with students of average or above intelligence. Show learners (those with lower IQs) may also benefit from the program. However, it is suggested that they be placed in a separate group to facilitate their slower progress.

The same strategies as outlined in the Dyslexia Training Program are used here but on a broader scope. More emphasis is placed upon composition and reading comprehension.

Due to the cumulative and sequential presentation of concepts, adhering to the order of the lessons is critical. Each class should begin with the specified lesson and continue daily through the entire series. If it becomes necessary to accommodate new students in mid-year, a new class should be formed. Workbooks and other supplemental materials designed to accompany the videotaped series are available through Educator's Publishing Service.

The team teacher is not required to have training or experience with the curriculum, since the teacher on the tape is the primary instructor. However, it is important that this individual interacts with the students and provides a supportive, non-threatening, well-organized environment for the student to receive maximum benefit from the videotaped lessons.

VISUALIZING AND VERBALIZING FOR LANGUAGE COMPREHENSION AND THINKING
(Lindamood-Bell Learning Processes)

This program deals with remediating deficits in reading comprehension. It presupposes a basic reading vocabulary and does not teach word attack skills or phonics. It is based on the assumption that mental imagery is the foundation for language comprehension and thinking skills. Imaging is so basic and natural to thinking and language processing that may have been assumed. However, many students may exhibit a language comprehension/expression, and weakness due to the inability to visualize.

The Visualizing and Verbalizing program involves stimulating imagery to development language comprehension and expression. This program develops imagery from one word and extends through sentence by sentence processing to whole paragraphs and pages of text.

Many students with weakness in language comprehension also have some weakness in expressive language. Although the sessions are focused on stimulating visualization, expressive language is remarkably influenced.

Images are used to create gestalts from language. Students are then able to develop the skills of identifying the main idea, drawing inferences, predicting and evaluating. This process begins at a very basic level and had been effective even with individuals previously unable to image. The student is taught to image from both oral and written language. Once the imaging becomes automatic, significant gains occur in reading comprehension, oral language comprehension, oral language expression, and paragraph writing.

WILSON LANGUAGE TRAINING PROGRAM

Barbara A. Wilson developed the Wilson Reading System at the Wilson Learning Center in Hopedale, MA. Resulting from her work at the Massachusetts general Hospital Language Disorders Unit. This system is a remedial reading and writing program for individuals with a language-based learning disability and is based on Orton-Gillingham philosophy and principles.

This is a multisensory approach that teaches the structure of words in the English language so those students master the phonological coding system for reading and spelling. The teaching techniques utilize visual-auditory-kinesthetic-tactile methods.

The Wilson Reading System materials include phonetically controlled readers that are geared toward older students. The material is presented in 12 steps in a systematic, sequential and cumulative manner.

The Wilson Language Training Program publishes the Wilson Reading System, provides Wilson Overview Workshops to schools, organizations, and literacy providers, and conducts Level 1 Wilson Certified Training in public schools.

The Wilson Level 1 Training is conducted in schools for one academic year (September-June). Teachers work with language learning disabled students under the supervision of a trainer. On-Site monthly seminars assist teachers with implementation. Pre and post testing is required. Significant gains have been documented who students who have been unsuccessful with other methods.

THE WRITING ROAD TO READING (The Spalding Foundation)

The Spalding Method is a unique program designed for the regular classroom that incorporates the use of the Orton phonograms to teach the sounds of the language, multisensory instruction, and intensive, systematic phonics instruction.

It is a total language arts method since it integrates the four essential elements of listening and reading comprehension, speaking, and writing. It was designed to challenge students

who have a familiarity with language as well as those who have language deficits. Therefore, it can be the total regular education reading program.

The Spalding Foundation is a non-profit organization that was incorporated in 1986 with Mrs. Romalda Spalding as the Chairman of the Board of Directors. Mrs. Spalding has been directly involved in both the establishment of the goals and policies of the Foundation.

The Foundation offers beginning, intermediate, and advanced teacher training courses in The Writing Road to Reading. These courses can be taken for college credit. The Foundation also offers Writing Across the Curriculum in which teachers learn techniques used in narrative, descriptive, and expository writing.

Materials needed for instruction in The Writing Road to Reading include a notebook used for spelling and vocabulary development, a spelling scale to chart progress, comprehension lessons, and quality literature.

WRITING TO READ

John Henry Martin, a retired school superintendent with thirty-five years of educational experience, created Writing to Read. It is a computer-based instructional system designed to develop writing and reading skills of kindergarten and first grade children.

Writing to Read was not designed specifically for dyslexic children, but as a beginning reading program for children in the educational mainstream. However, this program incorporates many of the instructional principles proven to be effective with dyslexic children. It includes an emphasis on teaching letter-sound correspondences and mastery of the alphabetic principle, the built-in promotion of phonological awareness, the incorporation of multisensory activities, and the opportunity for extensive practice.

In addition, the innovative application of computer technology for teaching reading and spelling skills through writing may prove quite effective for the dyslexic child. The rationale of Writing to Read is based on the theory that the young child learns to read words that he or she has composed more readily than words written by someone else. This method has been called a process approach, as compare to a basal reader approach in which the vocabulary is controlled.

Although described as computer-based instruction, the computer is only of six different workstations in which the curriculum is presented. Students actually spend a maximum of fifteen minutes a day at the Computer Station. Other stations include Writing/Typing, Work Journal, Listening Library, Multisensory and Make Words.

Necessary materials include IBM PC jr. Personal Computers, IBM Electric typewriters, cassette tape players, prerecorded audio cassettes, audio headphones, classic children's books, Writing to Read work journals, writing utensils, and various multisensory materials, such as sand trays and clay.

New concepts are introduced at the Computer Station. Phonemes are introduced sound by sound within the context of these words. Directions are simultaneously presented to students via audiocassettes. This method allows for visual, auditory, and kinesthetic input. Games are also included in the Writing to Read software, providing for review, as well as adding an element of fun.

IBM provides teacher training for Writing to Read at cost. IBM provides three-day leadership training workshops and the trained teachers return to their schools and conduct two-day on-site in-service workshops for school faculty. IBM training consultants are also available to come to schools on request for a fee. Training for Writing to Read is not strictly controlled and there is no certification requirement that must be met before teaching curriculum.

The estimated cost in 1988 for installing Writing to Read in a school, starting with a bare room, was from $15,000 to $18,000. This figure is based on serving 120 students a day. The approximate cost over a five-year period is $25 per student.

LANGUAGE!

LANGUAGE! is a structured, sequential, cumulative curriculum for students at risk for failure to aquire literacy skills. LANGUAGE! is based on current scientific research documenting best practices in literacy acquisition. It is an accelerated intervention curriculum focused on multisensory, explicit, and direct teaching of the components of written language. The curriculum is individualized, allowing students to begin at a level within the curriculum where they can succeed. Learning occurs sequentially and cumulatively to ensure that each student masters literacy concepts.

LANGUAGE! is recommended for use with three groups of students: those with learning disabilities, English language learners (ELL), and those who test below the thirty-fifth percentile on standardized testing. It works in a variety of settings, including general education, special education, inclusion programs, ELL programs, blended classrooms, specialized tutoring programs, and pull-out programs.

LANGUAGE! addresses 17 comprehensive, integrated strands:

- Phonemic/Phonological Concepts
- Phonemic Awareness
- Phonemic-Grapheme Associations
- Syllabication
- Word Recognition
- Vocabulary Development
- Text Reading
- Comprehension
- Spelling
- Orthography
- Mechanics
- Composition

- Grammar and Usage
- Syntax and Sentence Structure
- Semantic Relationships
- Figurative Language
- Morphology

It is broken into three levels consisting of 18 units each (for a total of 54), with each level corresponding to approximately one year of study. Each level includes an Instructor's Manual (a road map of what to teach), Student Mastery Books (the ongoing assessment tool of the curriculum), and J&J Language Readers (decodable texts corresponding to each unit). The Instructional Resource Guide for Teachers explains how to teach the curriculum and is used in conjunction with the three Instructor Manuals, which outline the scope and sequence of each level of the curriculum. Sounds and Letters for Readers and Spellers, another core component of the curriculum, provides daily lessons in phonemic awareness for Level 1. Along with these materials, several supplemental components are available that provide lessons and activities to reinforce the concepts addressed in the core curriculum.

A highly effective six-day Professional Development Course is recommended and can be tailored to meet the needs of the district. The course presents the research base of the curriculum, an intensive review of phonemic awareness, and the methods and techniques used to teach the curriculum and maximize success for students. Other trainings are available to assist districts in building capacity.

APPENDIX A

MISSISSIPPI LAW

AN ACT TO AMEND SECTION 37-23-15, MISSISSIPPI CODE OF 1972, TO AUTHORIZE PILOT PROGRAMS FOR TESTING CERTAIN STUDENT FOR DYSLEXIA IN THE PUBLIC SCHOOLS; AND FOR RELATED PURPOSES.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MISSISSIPPI:

SECTION 1. Section 37-23-15, Mississippi Code of 1972, is amended as follows:

37-23-15

The State Department of Education, in accordance with Section 37-23-1 through 37-23-75, and any additional authority granted in this chapter, shall:

(a) Adopt pilot programs under which certain students enrolled or enrolling in public schools in this state shall be tested for dyslexia and related disorders as may be necessary. The Pilot programs shall provide that upon the request of a parent, student, school nurse, classroom teacher or other school personnel who has reason to believe that a student has a need to be tested for dyslexia, such student shall be reviewed for appropriate services. However, a student shall not be tested for dyslexia whose parents or guardian objects there to on grounds that such testing conflicts with his conscientiously held religious beliefs

(b) In accordance with the pilot programs adopted by the State Department of Education, such schools boards shall provide remediation in an appropriate multisensory, systematic language-based regular education programs, as determined by the school district, such as the Texas Scottish Rite Hospital Dyslexia Training Program, pertinent to the child's physical and educational disorders or the sensory area in need of remediation for those students who do not qualify for special education services.

(c) The State Department of Education, by not later than January 1, 1997, shall make recommendations to the school boards designated for the pilot programs for the delivery of services to students who are identified as dyslexic.

(d) For the purposes of this section:

(i) "Dyslexia" means a language processing disorder that may be manifested by difficult processing expressive or receptive, oral or written language despite adequate intelligence, educational exposure and cultural opportunity. Specific manifestations may occur in one or more areas, including difficulty with the alphabet, reading comprehension, writing and spelling.

(ii) "Related disorders" shall include disorder similar to or related to dyslexia such as developmental auditory imperception, dysphasia,

specific developmental dyslexia, developmental dysgraphia and developmental spelling disability.

(e) Local school districts designated for the pilot programs may utilize any source of funds other than minimum program funds to provide any services under this section.

(f) Nothing in this section shall be construed to require any school district to Implement this section unless the local school board, by resolution spread on its minutes, voluntarily agrees to comply with this section and any regulations promulgated under this section. Any local school board may withdraw from participation in the program authorized under this section by providing written notice of its determination to withdraw to the State Department of Education no later than June 1 of the preceding fiscal year.

(2) State funding for the pilot programs for testing students for dyslexia shall be subject to the availability of funds specifically appropriated therefore by the legislature.

(3) The State Department of Education shall develop a report to the 1998 Regular Session of the Legislature to be submitted to the Chairmen of Education Committees of the Senate and House of Representatives not later than November 1, 1997, with recommendations as to the effectiveness of the pilot programs for students with dyslexia and whether or not the pilot programs should be expanded or discontinued.

(4) This section shall stand repealed from and after July 1, 1998.

SECTION 2. This act shall take effect and be in force from and after July 1, 1996.

APPENDIX B

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APPENDIX C

GLOSSARY OF TERMS

Analytic Phonics- uses prior knowledge of letters and their corresponding sounds to form new words. For example, if *can* is a sight word, new words can be formed by substituting different initial consonants (man, ran).

Auditory Dyslexia- This is a type of dyslexia first described in detail by Myklebust in 1978 which is characterized by the individual's inability to integrate auditory information or to make the connection between phonemes and graphemes.

Constitutional Origin- relates to the origin of the dyslexic student's disability. The nature of the disability does not result from injury, but rather is of an inborn nature.

Developmental Auditory Imperception- Difficulties in perceiving and using what is heard. The student may have difficulty with auditory processing, auditory discrimination, and/or learning sound-symbol associations.

Developmental Dysgraphia- A severe difficulty in producing handwriting that is legible and written at an age-appropriate speed.

Developmental Spelling Disorder-Difficulty with learning to spell.

Dyscalculia- Difficulty performing arithmetic tasks. The individuals performance is below the standard expected of him/her on the basis of I.Q., age level, or grade level.

Dysnomia- Difficulty with word retrieval.

Dysgraphia- Inability to write based on extreme spelling disability that is not due to brain damage but to a developmental condition.

Dysphasia- A severe difficulty with expressive and receptive oral language.

Expressive Language- Conveys information through writing, speaking, or gesturing.

Instructional Reading Level- The reading level of an individual whereby a teacher can focus instruction because the student can read at 80-85% proficiency and with 80-90% comprehension.

Intensive Phonics- A combination of analytic phonics and synthetic phonics.

Language-Based- Language arts curriculum which relates all aspect of language, oral and written, into meaningful settings.

Mutlisensory- An Instructional approach that combines auditory, visual, and tactile element into learning tasks.

Phonemic Awareness- Ability to focus on and manipulate phonemes in spoken words.

Phoneme- The smallest segment of sound in a word.

Specific Developmental Dyslexia- Difficulty with all areas of language use.

Synthetic Phonics- Phonics that teaches students the sounds of the letters first and then combines or blends these sounds to create words.

APPENDIX D

Parent Interview

Name of Student:_____ **Date:**_____

School: _____ **Grade:** _____ **Birth date:** _____

Parent(s) names: _____

Address: _____ **Phone:** _____

To aid in assessing the problems your child is experiencing in school and to detect the possibility of dyslexia, please answer each of the following questions.

YES	NO		
		FAMILY HISTORY	
		1.	Have any other member of the family had learning problems?
___	___		Father
___	___		Mother
___	___		Sibling
			Explain _____
___	___	2.	Has your child received any type of remedial instruction at school?
			Explain: _____
___	___	3.	Has your child repeated a grade?
		PHYSICAL HISTORY	
___	___	1.	Has your child ever been critically or chronically ill?
			Explain: _____
___	___	2.	Has your child ever had an extremely high fever?
___	___	3.	Does your child have any physical problems that you feel may cause difficulty in learning?
___	___	4.	Does your child have allergies?
___	___	5.	Has your child ever experienced a severe blow to the head?
___	___	6.	Is your child currently taking medication?

Please List _____

___ ___ 7. Does your child seem to have trouble hearing?

___ ___ 8. Does your child seem to have trouble seeing?

BEHAVIOR OBSERVATIONS

___ ___ 1. Do you have to often repeat instructions to your child?

___ ___ 2. Does your child seem to have difficulty following directions?

___ ___ 3. Does your child seem to spend more time than is appropriate on homework?

___ ___ 4. Does your child seem to need an extraordinary amount of help with homework?

___ ___ 5. Does your child seem to have more difficulty in reading, writing, and spelling than in most other subjects?

___ ___ 6. Do your child's grades in reading, writing, and spelling seem low compared to his ability to think and understand?

___ ___ 7. Do you spend time reading to your child?

___ ___ 8. Does your child seem to enjoy being read to?

___ ___ 9. Does your child hesitate to read to you?

___ ___ 10. Does your child talk favorably about school?

Please include all additional information that might help us to help your child.

APPENDIX E

Teacher Observation Checklist

Name of Student:_____ **Date:** _____

School: _____ **Grade:** _____ **Birth date:** _____

Referred by: _____ **Position** _____

Checklist completed by: _____ **Position**_____

YES	NO	ACHIEVEMENT	
___	___	1.	Does student seem to have the intellectual ability to develop reading skills? Are skills at a level equal to his/her peers?
___	___	2.	Is the student unable to read satisfactorily in spite of adequate intelligence and educational opportunity?
___	___	3.	Is student's performance in academic tasks often inconsistent?
___	___	4.	Are student's written assignments of poorer quality than would be expected considering his/her intellectual potential?
___	___	5.	Can student comprehend reading at his/her grade level?
___	___	6.	Can student explain major facts from stories read silently?
___	___	7.	Is student's math recall ability limited, especially with words and names?
___	___	8.	Are student's math skills on grade level?
___	___	9.	Does student have difficulty reciting the alphabet correctly in sequence?
___	___	10.	Does student have difficulty matching lower and upper case letters by name?

___ ___ 11. Does student have difficulty reciting the alphabet correctly? in sequence (not in song or rhyme)?

___ ___ 12. Does student have difficulty visually matching identical words and short phrases?

___ ___ 13. Does student have difficulty with handwriting?

___ ___ 14. Does student have trouble with drawing, writing, and copying skills?

___ ___ 15. Does student have difficulty with spelling?

___ ___ 16. Does student have difficulty discrimnating similar words? and letter sounds?

___ ___ 17. Does student show confusion differentiating short vowel sounds?

BEHAVIOR

___ ___ 1. Does student demonstrate directional problems?

___ ___ 2. Does student have difficulty with spatial orientation i.e., before/after, left/right, etc.?

___ ___ 3. Does student demonstrate a hand preference? R___L___

___ ___ 4. Does student demonstrate a short attention span?

___ ___ 5. Does student demonstrate difficulty with coordination?

___ ___ 6. Is student easily distracted from tasks?

___ ___ 7. Does student exhibit signs of frustration in class?

___ ___ 8. Is student frequently overactive or disruptive in class?

___ ___ 9. Is student often passive or withdrawn?

___ ___ 10. Does student often forget assignments?

___ ___ 11. Does student often lose papers?

___ ___ 12. Does student have difficulty remembering and following directions?

___ ___ 13. Does student lack organizational skills?

___ ___ 14. Does student show interest and motivation towards school?

APPENDIX F

Dyslexia Referral Form

Date: _____

Student: _____ **D.O.B.:** _____ **Age** _____

ID#: _____ **Campus** _____

Person making referral: _____

Reason for referral: _____

_____

_____

_____

_____

GENERAL INFORMATION

Grade _____ **Retention: Yes/No** **When?** _____

Excessive Absences: Yes/No **Health: Good/Fair/Poor**

Hearing and Vision Evaluation: **Vision** ___**Pass** ____**Fail**
Hearing ___**Pass** ____**Fail**

Medication: (please list) _____

_____

SPECIAL PROGRAMS

ESL/ Bilingual	**Yes/No**	**When?** _____
Chapter Reading	**Yes/No**	**When?** _____
Chapter Math	**Yes/No**	**When?** _____
Gifted and Talented	**Yes/No**	**When?** _____
Special Education	**Yes/No**	**When?** _____
Ever referred to SPED	**Yes/No**	**When?** _____

APPENDIX G

MULTISENSORY PROGRAM REVIEW FORM

In reviewing programs for implementation, it is helpful to compare the various characteristics of each program. This form can assist in the review aspects of a program and the comparison of programs.

Reviewer: _____ Date: _____
School: _____

Information Sources: _____
_____

Name of Program: _____

Author(s) of Program: _____

Date of Publication: _____

Comments of Specific Program Review Components

Areas Covered by Program

Reading _____ Writing Penmanship _____

Spelling _____ Other Language _____

Writing-Composition _____ Other: _____

Program Characteristics

Age/Grade Range of Program Design: _____

Suggested Group Size: _____

Length of Program for Students: _____

Intended Outcome for Students: _____

Support Services Offered or Needed: _____

Program Comparisons

Rate how well the program meets the following descriptors by indicating: (4) for Excellent, (3) for Good and (1) for Poor.

_____1. The program is specifically designed for students with dysle xia.

_____2. The program was developed by a person with extensive training and experience in teaching students with dyslexia at all age levels and with varying degrees of severity.

_____3. The program provides criteria for evaluating student pro gress.

_____4. The program provides for multisensory learning.

_____5. The program provides spelling and writing components.

_____6. The program provides ample opportunity for review of previous learning.

_____7. The program provides curricula coherence between grade levels and between the remedial classroom and the regular classroom.

_____8. The program provides for individualization to meet the needs of various students in various settings.

Teacher/General Education Commitment Required

YES	NO		
___	___	1.	Does the program provide for training of instructors to implement the method?
___	___	2.	Are personnel required to be trained?
____	___	3.	Does program provide training?
___	___	4.	Are the training cost excessive?
___	___	5.	Are the costs of materials excessive?
___	___	6.	Are training materials consumable?
		7.	What is the class setting recommended for service delivery? _____
		8.	What is the recommended teacher/student ratio? _____

Support Studies, Data or Reports from Current Program Users

_____
_____
_____
_____

Advantages of the Program

Short Range

_____
_____

Long Range:

_____
_____

Disadvantages of the Program

Short Range:

_____
_____

Long Range:

_____
_____

Comments:

_____
_____
_____
_____
_____
_____
_____

Overall Program Rating

_____ Highly Recommended
_____ Recommended
_____ Recommended With Reservations
_____ Not Recommended for Consideration
_____ Cost of Training

Materials Available For:

YES	NO	
___	___	Teachers
___	___	Students
_____		Cost of Materials

APPENDIX H

INFORMATION SOURCES ON ASSESSMENT

After a review of the information from Phases 1 and 2 of the process, the individuals responsible for the evaluation would determine what test(s) need to be administered in Phase 3 of the process. The following list of tests is not comprehensive and does not reflect an endorsement by Mississippi Department of Education. These are among the best examples of tests measuring specific characteristics of dyslexia. When advanced qualifications or certifications are required, the test is marked by an *. Examiners are cautioned to review the examiner qualifications prior to the administration of any test and to utilize a test only for its intended purpose. Competent administration and interpretation of any test requires practice and careful study of the examiner's manual and materials.

UNDERLYING CAUSE
PHONOLOGICAL PROCESSING

Comprehensive Test of Phonological Processing
Richard Wagner, Joseph Torgesen & Carol Rashotte
Pro-Ed, (512) 451-3246
Cost: $184.00
Target Age: 5-25 years
Interpretation: Standard scores for age in phonological awareness, phonological memory and rapid naming

Lindamood Auditory Conceptualization Test
Pat & Charles Lindamood
Pro-Ed, (512) 451-3246 or 1-800-897-3202
Cost: $98.00
Target Group: Kindergarten - Adult
Interpretation: Minimum criteria for grade, K - Adult

Test of Auditory Analysis Skills (also referred to as Auditory Analysis Test)
Jerome Rosner
Academic Therapy Publication
1-800-422-7249
Cost: $14.00
Target Age: K - 3rd grade
Interpretation: Grade level criteria K - 3 rd grade

Woodcock -Johnson-Psycho-Educational Battery-III (WJ-III)
Sound Awareness
Riverside Publishing 1-800-323-9540

Texas Primary Reading Inventory (TPRI-revised)
K and 1st grade level
Texas Education Agency
Publications, (512) 463-9744
P.O. Box 13817
Austin, Texas 78711
Cost: Call (512) 463-9024
Target Age: K-2nd grade

Phonological Awareness Test (PAT)
Carolyn Robertson & Wanda Salter
LinguiSystems- 1-800-776-4332
Cost: $89.95
Target Age: 5-9 years
Interpretation: Standard scores for age

CHARACTERISTICS OF DYSLEXIA
DECODING

Decoding Skills Test (DST)
Western Psychological Service: 1-800-648-8857
Target Group: 1st-5th grade reading ability
Interpretation: Criterion- referenced and grade scores. Adequate / Inadequate transfer of phonic skills to unfamiliar words.

Phonological Awareness Test (See Above)

Woodcock-Johnson Psycho-Educational Battery (WJ-III)
Word Attack
Riverside Publishing: 1-800-323-9540

Woodcock Reading Mastery Test - Revised (WRMT-R)
Word Attack
American Guidance Service: 1-800-328-2560

WORD RECOGNITION

Wide Range Intelligence Test (WRAT 3)
Western Psychological Services: 1-800-648-8857
Target Age: 5 years - Adult
Interpretation: Grade equivalent, standard score, percentile.

WJ-III, WRMT-R (See Above)
Letter-Word Identification

ORAL READING FLUENCY

Decoding Skills Test (See Above)
Interpretation: Grade Level competency with ratings of rate, error rate and oral reading comprehension.

Gray Oral Reading Test - 3 (GORT-3)
Pro-Ed, (512) 451-3246 or 1-800-897-3202

****Test of Word Reading Efficiency (TOWRE)***
Pro-Ed, (512) 451-3246 or 1-800-897-3202
Interpretation: Standard scores compare sight word reading efficiency to phonemic decoding efficiency

Woodcock-Johnson III
Reading Fluency
Riverside Publishing 1-800-323-9540

SPELLING

WRAT 3 (See Above)

Woodcock-Johnson III (See Above)
Spelling, Spelling of Sounds

OUTCOMES
READING COMPREHENSION

Gates - MacGinitie Reading Tests
Riverside Publishing 1-800-323-9540

Gray Oral Reading Test - 3
Pro Ed, (512) 451-3246 or 1-800-897-3202

Woodcock - Johnson/ Woodcock Reading Mastery Test - revised
Passage Comprehension
Riverside Publishing 1-800-328-2560

WRITTEN COMPREHENSION

Test of Written Language - (TOWL-3)
Pro-Ed, (512) 451-3246

INTELLIGENCE / OTHER COGNITIVE ABILITIES

When highly reliable, individually administered measures of intelligence, such as the *WISC-III, are not available, the following may be used as tools and results should be supported with data from multiple sources.

Cognitive Abilities Test (CogAT)
Riverside Publishing Company 1-800-323-9540

Comprehensive Test of Non-Verbal Intelligence (C-TONI)
Pro-Ed, 1-800-897-3202

Kaufman Brief Intelligence Test (K-BIT)
American Guidance Service 1-800-328-2560

Otis-Lennon School Ability Test - 7
Harcourt Brace 1-800-211-8378

APPENDIX I

The following questions and answers relate to various topics important to the dyslexia program:

RELATIONSHIP OF DYSLEXIA PROGRAM TO SECTION 504

1. **How does Section 504 of the federal law affect the way school districts implement the state dyslexia law?**

   - If a student is suspected of having a disability within the scope of the Individuals with Disabilities Education Act (IDEA), then all special education regulations must be followed. If this is done and the student is determined as having a disability under IDEA, the requirements of Section 504 will be met.

   - If a student is not suspected of having a disability within the scope of IDEA or is found to be ineligible for a disability category under IDEA, he or she may still have a disability within the scope of Section 504. These students must be evaluated and provided appropriate educational services that meet the individual needs of the student as adequately as are the needs of students with no disability in the district. At times, such non-discrimination requires the provision of special services or modifications of a program to enable the student to benefit from the education that is offered to him or her. Following the dyslexia guidelines will assure attention to the special problem of dyslexics who are considered to have such a disability under Section 504. Section 504 does not categorize students by label. The regulations utilize a broader definition to identify a disability.

2. **Is every student suspected of having dyslexia considered to have a disability within the scope of Section 504?**

   - No. To have a disability within the scope of the statute, the student's disability must substantially limit a major role life activity, the student must have a record of such a disability, or the student must be regarded as having such a disability. The code of federal regulations lists nine major life activities that may be affected: caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working [34CFR 104.3 (j)]. Thus a student who is performing adequately in the classroom and in school generally and does not have any other major interference with his or her life activities is not disabled under Section 504.

3. **How long must students spend in each phase of the process?**

   - Staff must be sensitive to the amount of time spent by students in each phase. Students should not spend unreasonable amounts of time receiving remedial strategies if they need referral for identification and placement into a dyslexia instructional program.

4. **What written documentation is recommended to ensure compliance with Section 504?**

   ➢ The following are recommended to be documented in writing, in the event that an Office for Civil Rights investigation be initiated by a formal complaint:

   - documentation that the notice of evaluation has been given to parents;
   - documentation of the evaluation data;
   - documentation of the decisions made by the district's team concerning the disability (whether or not a disability exists); and
   - documentation of the placement options and placement decisions.

5. **What procedural protections are provided to parents who may not agree with the decisions made by the district?**

   ➢ If the student is suspected of having a disability within the scope of IDEA, the procedural protections provided for in that law and the implementing regulations apply.

   ➢ If the student does not have a disability under IDEA, then the procedural protections of Section 504 apply. Under Section 504, parents may file a request for a hearing with a school district. The school district will appoint as an impartial hearing officer a person who is not connected in any way to the district. At the hearing, there will be opportunity for participation by the parents and, if desired, by counsel for the parents. If either party is not satisfied with the results of the hearing, they may appeal the decision to court.

GENERAL INFORMATION

6. **What is the state law regarding dyslexia?**

   ➢ The law requires the Mississippi Department of Education to adopt pilot programs under which students in public schools shall be tested for dyslexia and related disorders as may be necessary. In accordance with the pilot programs adopted by the Department, the local school boards shall provide remediation in an appropriate multisensory, systematic language-based regular education program(s). Such a program(s) would be pertinent to the child's physical and educational disorders or the sensory area in need of remediation for those students who do not qualify for special education services under IDEA.

- The Department must make recommendations to the local school boards designated for the pilot programs for the delivery of services to students who are identified as dyslexic by January 1, 1997.
- Appendix A contains a copy of the state law for review.

7. What are the school district's responsibilities in implementing the state dyslexia law?

- The state law does not mandate school districts to implement any additional services. The mandates rest with the Mississippi Department of Education to adopt pilot programs that a district may utilize in meeting the mandates of Section 504 to identify and provide services to students with dyslexia. Currently, districts are responsible for meeting the regulations of Section 504.

8. What monies may be used to support a dyslexia program?

- State law states, "Local school districts designated for the pilot programs may utilize any source of funds other than minimum programs funds to provide any services under this act." Although state law indicates any other source of funds may be utilized, federal regulations must be followed when determining the possible use of federal dollars. Federal dollars are earmarked by varying federal regulations with specific regulations for eligibility and use of the monies. State funding for the pilot programs shall be subject to the availability of funds specifically appropriated by the State Legislature.

THE PROCESS FOR IDENTIFICATION OF DYSLEXIA PHASES 1-4

9. What kinds of data about students should school personnel collect to comply with Phase 1?

- The data to be collected is listed on page 27 of this guide under Phase 1 of the process. The data collected can also be used to determine whether a student needs an individual assessment in Phase 2, as well as be utilized in determining dyslexia and a related disorder in Phase 3.

10. Is it necessary to record these results on special forms?

- No, districts do not have to change their normal methods of recording students' data. Nor does the state require special forms to record evaluation results. It is important that school districts keep this information in writing should the Office for Civil Rights investigate a formal complaint.

11. If students do not make expected academic progress in Grade 1, should they be evaluated for dyslexia?

- In most cases, no. It could be that the student has not had the breadth of enhanced language and literacy experiences required to progress at the same rate as his or her classmates. The student may need tutoring, placement in smaller classes or groups, or counseling. If a student continues not to progress, he or she may need to be provided individualized, remedial, compensatory, or dyslexia services.

12. At what grade level should emphasis be placed on the data gathering process?

- It is recommended that priority be given to Grades 1, 2, and 3 in order to focus on early intervention. However, when a student fails to make expected academic progress, the student's academic needs should be evaluated and analyzed at any grade level.

13. Who ultimately identifies the student as dyslexic and makes the placement decision?

- The identification must be made by the 504 Accommodation Team. This team is to include persons knowledgeable about the student and about the meaning of the evaluation data and placement options. It is recommended that the student's parent(s) also be part of this process.

14. Should each school district have a 504 Evaluation Team and 504 Accommodation Team?

- This is a local district decision based on need.

15. Should additional information be considered, if available in Phases 1-4? For example, can a physician or a private qualified examiner identify a student as having dyslexia or a related disorder?

- Yes. A district should consider all information available on a student. Ultimately, however, the school district's 504 Evaluation Team must take responsibility for identification.

16. What kind of test can be used to determine adequate intelligence, and is there a cutoff score to determine adequate intelligence?

- An individually administered standardized intelligence test may be used, but it is not required. A reasonable, proven assessment of intelligence or cognitive abilities may be used.

- There is no cutoff score to determine adequate intelligence. Average and above average intelligence scores and ranges are currently described in recognized research and in manuals for standardized tests.

17. Is it necessary to use an individually administered intelligence test to determine whether a student is dyslexic or has a related disorder?

- No. If the evaluation provides information that indicates a student has at least adequate or average intelligence based on the data collected, it is not necessary to administer a test. Documentation indicating the basis for this decision must be maintained.

18. How long should a student remain in a remedial program or in a program designed for students with dyslexia and related disorders?

- The local school district should, as with any alternative program, establish criteria for exit. Even after exit, the student may require some continuing supports in the regular program to be successful. Under Section 504, the district must provide those supports or related aids and services in accordance with an accommodation plan for the student.

19. How can it be determined that the student's lack of progress has a constitutional origin?

- Basically, a process of ruling out other origins makes this determination. If the student has had adequate educational experiences and has not experienced a brain injury, disease, or surgery aggravating the reading problems, then it may be concluded that his or her lack of progress is of constitutional origin.

20. Is there one test that can be used to determine that a student is dyslexic or has related disorders?

- There is no one test that a district can use. Each district should use multiple data sources and select both formal and informal assessment measures that are best suited for determining dyslexia and related disorders.

21. Should all students be reviewed for dyslexia?

- While all students' reading progress should be monitored, only those considered by the referring source (e.g., parents, teachers, counselors, etc.) are suspected of having dyslexia or related disorders should be referred for possible evaluation, identification, and placement.

22. May a parent refer a student?

- Yes, parents may request to have their child evaluated for dyslexia or a related disorder. The district may use information provided by the parent; however, ultimately the district must identify the student as having dyslexia or a related disorder.

23. Must a student fail a class or subject before being referred?

- No. When the student is not progressing appropriately and the teacher has exhausted alternative strategies for instruction in the regular classroom, the student should be considered for identification and services.

APPENDIX J

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What is Dyslexia? CEC/Eric Digest. No. 1432.

APPENDIX K

RESOURCE PAGE

Mississippi State Department of Education
Central High School Building
P.O. Box 771
Jackson, MS 39205-0771
http://mde.k12.ms.us
Phone: 601-359-3778

Billy Hill
Oak Hill School for Dyslexia
P. O. Box 8054
3111 Audubon Drive
Laurel, MS 39441
Phone: 601-428-0024
Madison Program Available 2002
Phone: 1-800-428-0024

Mississippi Dyslexia Association
Robin Lemonis
463 Waterford Road
Brandon, MS 39047
Phone: 601-919-2334

IDA
International Dyslexia Association
Chester Building Suite 382
Baltimore, MD 21286-2044
Phone: 410-296-0232

International Reading Association
P.O. Box 8139
Newark, DE 19714-8139
Phone: 1-800-336-READ

Recording for the Blind and Dyslexic
20 Roszel Road
Princeton, NJ 08540
Phone: 609 452-0606

Howard Kerce
Mississippi Scottish Rite Masons
P.O. Box 2767
Jackson, MS 39207-2767
http://kerce@netdoor.com
Phone: 601-352-5272

Texas Scottish Rite Hospital
Luke Waites Child Development Center
2222 Welborn Street
Dallas, Texas 75219
Phone: 214-559-7808

NCLD
National Center for Learning Disabilities
381 Park Avenue South, Suite 1401
New York, NY 10016
Phone: 212-545-7510

Cindy Nugent
Mississippi Library Commission
Library for the Blind & Physically Handicapped
1221 Ellis Ave.
Jackson, MS 39205
Phone: 1-800-446-0892 or 961-0892

LDA
Learning Disabilities Association
4156 Library Road
Pittsburgh, PA 15234
Phone: 412-341-1515

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